
URBAN, PORT & TRANSPORT ECONOMICS,
ERASMUS SCHOOL OF ECONOMICS,
ERASMUS UNIVERSITY OF ROTTERDAM.

The social media marketing of seaports

An explorative study of the marketing
communication usage of social media on the
largest container ports in the world

Author: Ziwei Zhou (Student NO. 354389)
Supervisor: Dr. Michiel Nijdam
Co-reader: Dr. LL.M. Peran van Reeven
Date: 12/18/2013

Table of Contents

Summary	iv
1. Introduction	1
1.1 Background	1
1.2 Research question	3
1.3 Approach	4
2. Seaports Marketing Communication Channel	6
2.1 Marketing	6
2.2 Seaport Marketing	8
2.3 Marketing communication	11
Function of marketing communication	11
Four facets of communication	12
The categories of (service) marketing communication	13
Marketing communication channel	13
2.4 Seaport marketing communication	14
3. The marketing potential of social media	16
3.1 Social media	16
Definition	16
Classification of social media	17
3.2 The marketing potential of social media	18
Social media: threat and opportunity	18
Overviews	19
Marketing potential in service industries	23
Marketing potential in B2B companies – An overview	26
3.3 Measuring the marketing usage of social media	27
Benchmark building	27
Constructing the measuring metric	28
4. Seaport social media	31
4.1 Overviews of the use of social media by ports	31
The use of social media in world major ports	31
The use of social media in European, North American and Asian ports	33
4.2 Content analysis: The use of seaport Facebook	43
Score the seaport Facebook pages	43
Other findings of the seaport Facebook page	48
4.3 Case studies of seaport social media and Facebook page	49
Port of Los Angeles	53
Port of Long Beach	56
Port of Oakland	59
Port of Seattle	62
Port of Virginia	64
Port of Houston	67
Port of Manzanillo	70
Port Klang	72

Port of Tokyo	74
Port of Rotterdam	76
Port of Algeciras Bay.....	79
4.4 Further analysis on marketing communication of the seaports' Facebook pages.....	83
5. Conclusion and limitation	93
5.1 Conclusion and Suggestion	93
5.2 Limitation	96
Reference	97

*To my parents and Yuki Amami, who always grant me infinite
courage and power when I encounter difficulties in my life.*

Summary

Nowadays, competition among seaports in the world has become ever fierce. Most ports are attempting to gain more competitiveness advantages over others by increasing their productivity and enjoying economy of scale to larger extend. However, facts prove that the seaports' common problem of underutilized capacity cannot be totally solved by these means. Proper marketing activities are urgently needed by seaports as well. On the other hand, social media as a brand-new marketing communication tool has already been intensively used by many other industries. In seaport industry, there seem also be some signs of the use of social media. But no existing research could offer us even primary understanding of seaport social media in aspect of marketing communication issues. In this thesis, we start to fill in this blank and offer some reference for further study.

We firstly conduct a comprehensive literature review on relevant academic fields, such as marketing in general, service marketing, seaport marketing and social media marketing. Some existing achievements made by marketing practitioners have also concerned by us to complement our knowledge base. Afterwards, the marketing potential of seaport social media has been summarized. Then we take a look at the use pattern of social media among the top 100 ports in the world and the top 10 ports in Europe, North America and Asia respectively. Besides, both scoreboard and case study have been employed to evaluate the marketing usage of seaport social media quantitatively and qualitatively. To understand the ways of marketing communication on seaport social media in depth, we further generalize and analyze the communication on selected ports' Facebook page in three facets, namely direction, content and image.

In the end we conclude seaports have not fully realized the marketing potential of social media yet, even though the degree of understand seems not the same among different areas. Regarding our findings, we also offer seaport some suggestions on how to make more use of social media as a marketing communication tool.

1. Introduction

1.1 Background

Admittedly, ports play a vital role in their local economies. It has been estimated that in 1988, American port activities had improved American economy by generating 1.2million jobs, \$28 billion in personal income, \$50 billion in GDP and \$13.5 billion in taxes (Pisani, 1989). Similarly, European Commission (2013) has determined the importance of their ports in terms of European transport business, Europe's competitiveness, job creation, investment and so on. Well-performed ports most likely make large contribution on their regional economy.

In the past, most seaports took little consideration into their potential competitors because of the monopolies status they once had (Cahoon, 2004). However, the liberalization and deregulation processes have widely undertaken in many transport sectors including maritime transport (Pando, Araujo and Maqueda, 2005). Commercialization, corporatization and privatization have become mainstream reform modes of port authorities. Moreover, the improved accessibility of hinterland further diminishes the monopoly role of port in certain locations (Pantouvakis, Chlomoudis& Dimas, 2010). It means nowadays ports have to face up with the competition market and compete with other ports.

The unitization of containers in maritime shipping leads most seaports to ever-fiercely compete in areas of gaining higher efficiency and lower cost (Slack, 1985). Many ports have invested large amount of their money into their operational infrastructure, intermodal transportation system. Some ports offer value-added activities to their customers (Alderton, 1999). Collaboration between seaports is also a common way for ports to take their competitiveness advantages (Atkinson and Court, 1998).

However, applying these approaches could not totally solve the problem of underutilized capacity for most ports in such hypercompetitive environment (Carlson, 1989; Martin & Thomas, 2001; Sletmo, 1999). In this regard, Stuchtey (1991) pointed out that the function of marketing should not be ignored. Meanwhile, Murphy (1991) highlighted the impact of marketing on seaport growth and survival.

Furthermore, the ports also have attempted to step into post-Fordism era to serve their

customers in more personalized ways (Notteboom & Winkelmens, 2001). Not coincidentally, main objective of marketing is to “sensitively serve and satisfy human needs” (Kolter and Levy, 1969). Therefore, marketing could also be a useful tool for ports and port authority to overcome the challenge raised by the new notion of post-Fordism ports.

Researchers and port managers started to recognize the necessity of port marketing in the early 1990s (like Murphy, 1991). And we have observed that some ports have already made effort on marketing. For example, there is a private marketing association called “Port of Hamburg Marketing (HHM)” in Port of Hamburg. This organization takes care of the marketing activities for Port of Hamburg, aiming to help the port to strength its competitive position. Because of its excellence in port marketing, HHM received the reward: “Global benchmark in Port marketing” in 2011 (Port of Hamburg, 2011).

However, a big part of seaports around world still have not yet applied marketing practices effectively and efficiently (Cahoon, 2004). On the other hand, Beth (2001), the CEO of HHM reveals that undertaking innovative and aggressive marketing is essential for seaports to survive in this ever-competitive global environment.

In reality, only small numbers of studies concern about the port marketing practice. Among them, Cahoon (2004) has conducted a comprehensive explorative research to understand what marketing activities and strategies seaports have undertaken in Australia. After studying all of the commercial seaports in Australia in-depth, he pointed out that the port marketing activities and strategies could be divided into four components: 1. Marketing communications; 2. Community liaison; 3. Trade and business development; 4. Customer relationship management.

If we carefully compare the port marketing communications determined by Cahoon (2004) with those are really used in some ports nowadays, it will not be surprising to find that one important communication approach or saying, a new communication channel might be missing – social media. When we simply browse the official website of some port authorities now, we are likely to see logos or hyperlinks of several famous social media website, like Facebook, twitter or YouTube. In fact, the marketing potential of social media for other types of organizations or companies (e.g. libraries, hotels) has already been noticed and discussed (Ayu & Abrizah, 2011; Chan & Guillet, 2011). Some owners of small and medium enterprises disclose their main objectives of using social media are to: 1. attract new customers 2. cultivate relationships with their audience 3.

increase awareness of their brand 4. communicate the brand online 5. receive feedback 6. interact with suppliers (Michaelidou, Siamagka & Christodoulides, 2011). Further, the marketing potential of social media has also been used in another transport sectors like the airline companies: once KLM's flights are about to land on their destination, the passengers will always be kindly asked to post any of their ideas or suggestion about this flight on KLM's twitter or Facebook homepage. KLM does guarantee replying their customers within one hour. "The outstanding advantage of social media over other communication channel in marketing is that social media can make marketers closer to their customers. In this way, marketers are able to understand customers better and easier." said Li, a professional media analyst in Taiwan. In academia, social media can be used in internal communication (Ehrlich and Shami, 2010), external communication with customers (Burton, 2011). It also could be used as a listening tool and a means of crowd sourcing for marketing researches (Crawford, 2010; Ehrlich and Shami, 2009).

1.2 Research question

Above, we have mentioned the importance of marketing for seaports competitiveness. And to some extends, the effectiveness of port marketing could indirectly affect the regional economic well-being. But the port marketing practice is relatively underdeveloped. Social media as a new communication media has already been used as an effective and innovative promoting tool in many other industries. However, even though some port authorities have also made use of social media for their ports, we can hardly find any studies concerning about the usage and applications of social media for port marketing. Within this context, we are willing to give the study of social media marketing in seaports a head start. Moreover, as the ultimate goal of port authorities is to optimize the port performance as a whole (De Langen, 2004), we do believe that port authorities have high incentive on port marketing activities. Further, most port social media websites we observe are controlled by their port authorities. Therefore, we our main research question will be: *"Do port authorities realize the marketing potential of social media?"* This research question will be further divided into three sub-questions, they are:

1. What is the marketing potential of seaport social media?

2. What is the use pattern of social media by seaports?

3. How do seaports conduct marketing communication on social media?

1.3 Approach

We will solve the research question by completing the following steps:

1) *identify marketing potential of social media:*

Our objective is to set evaluation criteria to tell whether the seaports have made full use of social media as a marketing tool. In an attempt to explore and summarize the marketing function of social media, we will adopt a comprehensive literature review on the social media marketing literatures. Afterwards, we will study successful cases of using Facebook as a marketing tool in reality. The brief case study section aims to make the marketing usage of social media specific and easier to understand. In regard of the characteristics of seaport and its product, an emphasis will be made on the social media marketing issues of B2B companies and services companies.

2) *identify and compare the use pattern of social media by the seaport in North America, Europe and Asia:*

The enablement of social media could indicate that the certain port has a primary understanding of social media's marketing potential. However, since the variance of ports' environment around the world might affect the use of social media, we could not generalize the use pattern for the whole world. This is why we select seaports from the three main economies in the world and divided them into three groups according to its location.

The use pattern will be described with these three elements: a) the presence of social media on the port website; b) the number and the type of social media used by port; c) the date when port start to use the certain social media. In consideration of comparability and representativeness, the ten biggest container seaports are selected from each region respectively.

Then, in order to apply homogenous evaluation index, we need to narrow down our research scope. For the thirty seaports, only the ones with Facebook fan page will be chose for further study.

c) *identify and evaluate the marketing usage of Facebook by ports*

As one of the most popular social media marketing tools, Facebook could be a good proxy to

indicate the ports' current situation of marketing usage of social media.

Apart from the number of "Like" and the frequency of status update, we will conduct content analysis on every status to form "the objective, systematic and quantitative description of the manifest content of communication" (Bernard, 1952). We will classify the status by variety of communication facets into different groups and do some proper statistics analysis.

In addition, comparison will be made between the marketing potential we determined in step 1 and that of seaports. A scoreboard will be created to quantify this comparison. Further, case study will be employed to understand the current marketing usage of seaport social media more specifically. The ports perform better in some aspects will provide other ports most intuitive examples about how to tap marketing potential of social media, whereas the fault of seaports would facilitate the further improvement of other ports as well.

This paper is structured as follows: Chapter 2 reviews the concepts of general marketing and seaport marketing (communication). Chapter 3 attempts to find and determine the marketing potential of social media from other industries by the means of literature review and case study. Chapter 4 investigates the ports' use pattern of social media in general and conducts empirical study of seaport Facebook page. The exploration on Facebook marketing usage in terms of frequency and intensity will also be made to completely answer the research question. Chapter 5 concludes the findings and makes further recommendation for seaport marketing.

2. Seaports Marketing Communication Channel

2.1 Marketing

The selling concept and the marketing concept

According to Kotler and Levy (1969), there are mainly two different meanings of the term “marketing” in people’s mindset. On one hand, marketing represents *selling, influencing and persuading*. On the other hand, marketing stands for *sensitively serving and satisfying human needs*.

Apparently, the first meaning of marketing might be more acceptable to the general public than the second one. And it is consistent with one of the marketing management philosophies called the “selling concept”. This concept is based on the assumption that consumers would not buy enough products spontaneously, so companies should use selling and promoting tools to persuade consumers to buy more products (Kotler, 2001). The selling concept has been widely conducted by the companies with overcapacity. Hard selling and advertising are two common marketing activities in this context. However, Kotler (2001) points out that the execution of selling concept has potential high risk, since it neglects the consumers’ real needs and wants. Once the customers dissatisfied with the promoted products, they are likely to spread the negative information about the products very fast to the public (Albrecht & Zemke, 1990).

The “marketing concept” is the idea and principle behind the second meaning of marketing. Levitt (1960) thought we had stepped into the age of abundance because of the ever-improved productivity in most industries. In such buyer markets, it is a major problem for companies to develop customer loyalties and satisfaction. For this reason, marketers and companies should pay more attention on customers’ needs. Kotler (2001) has summarized the marketing activities under the guidance of the marketing concept into four steps: 1) choose a well-defined target market; 2) understand the customers’ needs and wants; 3) companies coordinate together to satisfy customers; 4) make profit by delivery superior customer value.

The scope of marketing

By convention, people usually think only business firms need marketing function. However, Kotler

and Levy (1969) disagreed with this opinion. They recognized that non-profit or public organizations (i.e. police department, museums, public schools etc.) could and should embrace marketing into their daily operation as well, even though these entities' rarely have the main goal of profit-seeking. Moreover, they stated that marketing activities should not be restricted on goods. In broader sense, other 'products', like services, persons or even ideas, also need to be marketed. Later in 1972, Kotler has put forward the generic concept of marketing: "*Marketing is specifically concerning with how transactions are created, stimulated, facilitated and valued.*" In this concept, Kotler (1972) has further broadened the scope of marketing. It is worth noting that here "transaction" refers to the process of value exchange between any two parties.

The definition of marketing

Surprisingly, the definition of marketing is not unique. The definitions of marketing tend to be improved and develop across the time due to the popularity of marketing research and the intensive changes in real world (Wilkie & Moore, 2003). Koster (1991) has summarized eight-four different definitions of marketing.

Among them, American Marketing Association (AMA) has provided one of the most widely acceptable definitions of marketing in managerial perspective (Kotler, 2001). According to the latest version of marketing definition approved by AMA, Marketing is "*the activities, set of institutions, and process for creating, communicating, delivering and exchanging offerings that have value for customers, clients, partners and society at large.*" (AMA, 2013). In regard of social definition, Kotler (2001) pointed out that "marketing is a societal process by which individuals and groups obtain what they need and want through creating, offering and exchanging products and services of value freely with others." In this definition, "*product*" should not be narrowly referred as the tangible goods, it can be seen as the synonyms for "*offerings that have value for customers, clients, partners and society*" in AMA' definition.

Basic of Service Marketing

Besides, Gronroos (1989) defines marketing is "*to establish, develop and commercialize long-term customer relationships...*" Gronroos (1989) made this definition specially for service marketing.

According to the results of Nordic marketing research on service marketing, Gronroos (1989) concluded that the core of service marketing is nothing else but long-term customer relation. Furthermore, in order to build and retain good relation with customers, he suggested that the all the departments in service company which might have direct contact with customers should be responsible for their company's marketing function. If service companies imprison the marketing function only within the marketing department, employees in other functional departments are likely to take less care of satisfying customers' requirement. Because the employees would think that the marketing department is taking full charge of marketing activities, so marketing is a task which is none of their business (Morgan, McGuinness & Thorpe, 2000).

The products of seaport are mainly different kinds of services (i.e. vessel handling services, transport and logistics services etc.). So services marketing can be considered as a good basis for the further discussion on seaport marketing.

2.2 Seaport Marketing

Few marketing activities were carried out within seaports until the 1980s (Somers & de Wilde, 1997). With time going by, marketing gradually play a vital role in port management strategies (Lobo & Jain, 2001). Unfortunately, current research and discussion on seaport marketing is still fragmented (Cahoon, 2004). Pando, Araujo and Maqueda (2005) did a quite valuable transversal study of current situation of port marketing management for the world's major ports. They confirm that the emergence of marketing activities in seaports is due to the increasing competition among ports. Tseng and Chang (2005) conducted a case study to describe how Kaohsiung Port developed port's marketing strategies under the threat of the newly-built ports in Asian Pacific area. Instead of improving the port's facilities, Chang et al. (1998) pointed out that a comprehensive marketing strategy is the key to gain sustainable competition advantages for seaports. Marti (1986) highlighted that the marketing effort made onto port forelands should not be ignored. And marketing segmentation is needed to identity every target market in forelands. It seems that the necessity of port marketing has been widely realized, but the development of port marketing theory and the relevant empirical research is seriously lagging behind.

From service marketing to seaport marketing

However, as we mentioned above, the seaport products are normally variety of services offered by ports. For example, UNCTAD (1995) attempted to summarize the seaport products into three categories of services: services to the ship, services to the cargo and services to other users. In this regard, we could consider seaport industry as one kind of service businesses. And Cahoon (2004) believed that current marketing strategies which apply to service businesses in general would also be useful for seaport marketing.

According to the seaport marketing literatures developed on the basis of service marketing, we find there is a lack of empirical research testing the effectiveness and applicability of service marketing practice to seaports. Booms and Bitner (1981) consider participants, process and physical evidence as three additional important strategic elements for services marketing. In terms of participants, Branch (1997) only highlights the importance of motivating and training employees to form marketing culture for seaports. No linkage with well-established concepts of service marketing, like internal marketing, has been mentioned in his article. Branch (1998) also relates process to seaport logistics, but there is no concern for the seaport logistics service quality or the changing demand and supply along the seaport logistics chain. Moreover, for physical evidence, Somers and de Wilde (1997) borrow the concept of servicescape from service marketing. They point out that port marketing does not only refer to sell a location. The social climate and the infrastructure of ports should be taken good care by port marketers as well.

Besides, Somers and de Wilde (1997) have also realized the usage of relationship marketing to ports. In their opinion, seaport customers should be seen as partners of seaport. It means port should make effort on developing long-term relationship with their customers. Furthermore, in order to improve the quality of port services, more interaction between seaports and their customers is needed (Lobo & Jain, 2001). Lobo and Jain (2001) imply that listening to customers might have more significant impact on port service quality than stubbornly developing port infrastructure and reducing cost.

In general, it still remains unknown why service marketing concepts have not been made full use by researches on port marketing issues. There might be a gap between seaport marketing in theory and seaport marketing in practice.

Seaport marketing objectives

The seaport marketing objectives could affect the type of marketing activities the port executes. However, in the early age, these so-called seaport marketing objectives would better to be considered as general seaport management objectives (Canooh, 2004). For example, in Stuchtey's view (1978), the marketing objectives for seaports are attracting cargo, providing value-added services to be differentiated from other ports and increasing the port's growth rate. These objectives are too general to provide seaport marketing activities guide significance. Later, other researchers and research institutions have raised much more targeted marketing objectives for seaports (Misztal, 1999; UNCTAD, 1992). Not surprisingly, like that in service marketing, customer also takes a very important role in achieving the port marketing objectives. For example, one marketing objective put forward by Misztal (1999) is to "Design particular seaport services in port marketplace". Certainly, better understanding the port customers' needs and wants is the precondition to overcome this objective. Besides, shaping the port services consumption, managing the port services selling process and creating a more advanced service and pricing structure than that of other ports are also the main objectives of seaport marketing (Misztal, 1999; Stuchtey, 1991).

Seaport marketing activities

Appropriate marketing objectives could make sure the port marketers have implemented the effective marketing activities in right ways. However, most researches only focus on individual seaport marketing tools. Only a few relevant literatures discuss one or several marketing activities in strategic (for example, UNCTAD, 1993). UNCTAD secretariat (1993) classifies the port marketing activities by the "4p" of the traditional marketing mix (i.e. product, place, price, promotion).

For port 'product', Beth (2001) recommends ports provide differentiated valued-added services to gain competitive advantages. These services could be logistics services or hinterland connection. Moreover, Schulten (1991) thinks ports should conduct "one stop shopping approach", which means offering an integrated transport service package to customers.

For 'place', UNCTAD (1993) suggest that port marketers could make effort on building logistics

centers or free trade areas etc.

For 'price', pricing might be the most popular topic related to marketing activities. Published tariff rates are one of the useful marketing tools for ports, because it could be a bargaining chip for valuable customers (Dowd & Fleming, 1994). In addition, customized pricing executing for each port customer segment could, on one hand, be complained by seaport customers because of price discrimination (Cahoon, 2004). On the other hand, price discrimination might contribute to attracting large shipping line (Ashar, 2001).

The last element of '4p', promotion, is probably considered as the most common port marketing activities in people's mind. In essence, promotion is a way to communication with (potential) customers. So many researchers also use 'marketing communication' to refer to the promotional activities (for example, Cahoon, 2007). The main purposes of seaport marketing communication include raising awareness of port and port product, influencing the perception of seaport in customers' mind, retaining seaport customers loyalty, improving the port image and so on (Bernard, 1995; Somers & de Wilde 1997; Frankel, 1987; Stuchtey 1991b). We will further study on (seaport) marketing communications and their channels later in this article.

Furthermore, as seaports are become increasingly market-oriented, the position of customer is more important than that before (Figwer, 1999). Market research has become a key seaport marketing activity in need to better understand customers and also because of the competitive environment. Thus, for example, market research could offer port the reference for market segmentation and targeted marketing concentrating on every segment would be much more efficient than mass marketing (Pieczek, 2000; UNCTAD, 1992). So market research is also marketing activities worthy to be used widely by ports.

2.3 Marketing communication

According to AMA's marketing definition, communication is one component of marketing process. It also represents "promotion" in marketing mix.

Function of marketing communication

The main objective of marketing communication is to affect customers' perception on the value

of product (Olof, 2006). In detail, the functions of marketing communication could be listed as follows:

deliver the persuasive information (Frazier, 1983)
foster participative decision-making process (Anderson, Lodish & Weitz, 1987)
coordinate programs (Guiltinan, Rejab and Rodgers, 1980)
exercise power (Gaski, 1984)
encourage customer loyalty and commitment (Mohr & Nevin, 1990)

The five functions are all important elements of marketing, especially in the managerial perspective. Therefore marketers have paid lots of attention on their communication strategies.

Four facets of communication

Additionally, when we attempt to describe or evaluate certain marketing communication, these four facets of communication should not be ignored: frequency, direction, modality and content (Farace, Monge & Russell, 1977; Guetzkow, 1965).

1. Frequency: it refers to the amount, the frequency and the duration of the contact between two parties. For the best results, the contact should be neither too much nor too few (Farace, Monge & Russell, 1977).
2. Direction: it refers to the movement of the communication (Farace, Monge & Russell, 1977), e.g. vertical or horizontal; upward or downward; one-way or two-way (Mohr & Nevin, 1990).
3. Modality: it refers to the medium or the method used to deliver information. Communication modality can be simply divided into face-to-face, written, telephone and other modes ((Mohr & Nevin, 1990), it can be classified according to the richness of information carried by the media (Lengel & Daft, 1985) or the formality of communication mode (Stohl & Redding, 1987).
4. Content: it refers to the message that is delivered. Content can be used to analyze communication interactions (Anlemar & Stern, 1978; Frazier, 1983). In general, there are two classification rules for communication content. Gross (1968) directly divided content into physical inventory, product characteristics, promotion activities, marketing condition and pricing structure based on the type of information. Later, Frazier (1983) attempted to classify as direct

communication content and indirect communication content. The direct communication content is quite straightforward and purposeful. For example, recommendations, promise and requests all could be seen as direct communication content whereas the indirect communication content aim at affecting or influencing the receivers' perception or brief unwittingly.

The categories of (service) marketing communication

Normally, there are six categories of marketing communication, namely advertising, personal selling, public relation, publicity, direct marketing and sales promotion. They are also known as promotion tools. However, unlike that of physical goods, the characteristic of intangibility and heterogeneity always brings customers difficulties to evaluate the services (George & Berry, 1981; Mortimer, 2002). In this regard, some researchers illustrated that the traditional marketing communications are not sufficient for service marketing. Other communication modes, like the word-of-mouth communication should also be included into the marketing communication (Conduit & Mavondo, 2001; Booms & Bitner, 1981). It has been proved that the information transmitting via word-of-mouth communication is usually considered to be less biased and more credible in customers' perception (Murray, 1991; Zeithaml, 1981). Positive word-of-mouth would effectively reduce customers' uncertainty about the services, so customers' are more likely to purchase the service (Maxham, 2001).

Marketing communication channel

So far we have discussed something about marketing communication itself. However, the carriers for these communications are also worth knowing. In academic, such carriers are called communication channel and they include newspaper, magazine, television, radio, telephone, billboards, CDs, posters, Internet and other media (Kotler, 2001). But the emergence of social media has largely influenced the traditional communication tools and strategies with customers (Mangold & Faulds, 2009). Social media has rapidly been used as a brand-new marketing communication channel, and in a survey conducted in 2010, 94 percent of marketing executives replied that they would be willing to invest more on social media in the following three years (Busby et al., 2010). The popularity of social media would spill over into service marketing, as apart from the traditional communication mix, social media also carries large amount of

word-of-mouth communication. We will have an in-depth discussion on social media in the next chapter.

2.4 Seaport marketing communication

Even though several reports and thesis have raised the issues of seaport marketing communication, but the study still stays at primary level. The authors either provide the list of their recommended seaport promotion tools or explore which marketing communication has been used by ports in reality. For example, UNCTAD (1995) has presented port marketing communication can be done in forms of advertisement and media propaganda, direct marketing, public relation, event (e.g. port day), commercial or school visit, seminar and speech etc. UNCTAD (1993b) divided these activities into two categories: one is information-related action which is responsible for information distribution and collection; the other one is service-related action (e.g. make customized service package for customers).

In more detail, Cahoon (2004) conducted telephone interviews to investigate the usage of marketing communication by Australian seaports. The marketing communication activities used by no less than 90 % of Australian seaports are listed below:

1. Websites (96.67%)	2. Media release (96.67%)
3. Conference presentation (96.67%)	4. Brochures (96.67%)
5. Port tour (93.33%)	6. Advertisement in trade magazine (90.00%)
7. Sponsorships (90.00%)	

He found that Australian port had already made use of variety of media to provide information to their stakeholders and customers. The media include print publication like magazine or newspaper, website, presentation and in lesser extent, television and radio.

Moreover, the value of word-of-mouth communication was widely recognized by Australian seaports (Cahoon, 2004). But in the interviews with the senior managers of each port, 13% of respondents said that they had no means to encourage this communication, while 60% of respondents replied ensuring customers' satisfaction was sufficient for ports to encourage positive word-of-mouth. Only 27% of respondents actively encouraged this cost-efficient communication through advertising, conducting seminars, and winning awards etc. Seaports

seem to lack proper ways to market themselves by word-of-mouth communication.

In the case of Port of Hamburg, as we have already mentioned earlier in this paper, Port of Hamburg Marketing (HHM) is an excellent marketing organization mainly serving for this port. According to Claudia Roller (2013), the chief executive of HHM, Port of Hamburg also attempt to communicate with (potential) customers through port official website, publications and presence at some events like trade fairs or information evening. However, she released that the central communication tools of HHM is public relation activities and an internet platform, PORTblog. PORTblog enables efficient interactive communication among companies in the port and port (potential) customers, aiming to “simplify marketing of logistics services in the Port of Hamburg” (Port of Hamburg, 2013).

PORTblog is undoubtedly a new online marketplace other than traditional port websites. Its appearance encourages us to further explore other new ways to market the seaport on the Internet. On the other hand, the increasing importance of social media to marketing should not be overlooked by us. Social media could harness the power of word-of-mouth recommendation and thus become potent marketing tools (Madway, 2008). For this reason alone, we do believe social media could be a good online marketplace and communication channel for seaport.

In conclusion, as a branch of service marketing, the focus of seaport marketing is on developing long-term relationship with customers as well. Furthermore, intensive interaction with customers will help the seaports to improve their products. Unlike the real objects, the marketing of service products more relies on the word-of-mouth communication. However, the existing researches concern nothing about seaport marketers’ difficulties of encouraging positive word-of-mouth. It seems that the development of seaport marketing is unbalance in academia and in practice.

On the other hand, even though many seaports in the world have opened their Facebook, Twitter and other social media accounts, there is no evidence about the usage of social media for port marketing shown in the existing port marketing literature. Therefore, in the next chapter, we would like to study the social media marketing in other industries, where there are already some serious academic researches published or some relevant articles written by marketing practitioners.

3. The marketing potential of social media

3.1 Social media

Definition

The emergence of social media in this decade has stimulated variety researches on this topic. For the definition of social media alone, many researchers have offered their own ideas (e.g. Richter & Kohr, 2007; Drury, 2008; Kaplan & Haenlein, 2010; Ryan & Jones, 2009). Among them, Kaplan and Haelein (2010) define social media as *“a group of Internet-based application that builds on the ideological and technological foundations of Web 2.0, and that allow the creation and exchange of user generated content.”* We appreciate this definition most and the reasons are as follows:

1) The definition has highlighted the relation between web 2.0 and social media, while these two terms have rarely been strictly distinguished in many academic articles (e.g. Thackeray, Neiger, Hanson and McKenzie, 2008). Accurately, web 2.0 is a platform and foundation for the appearance of social media rather than a synonym of it (Kaplan & Haenlein, 2010). According to O’Reilly (2005), web 2.0 represents a new way to use the World Wide Web. In the era of web 1.0, the web content is static, that is, only website owners have the rights and permission to create and control the content and application on their website. In contrary, web 2.0 enables all the visitors to post the content generated by themselves onto websites. Thus, the users of web 2.0 websites have changed into co-developers of websites from the purely viewers (Adebanjo & Michaelides, 2010). In this regard, social media could also be seen as a new communication tool in the context of web 2.0 (Chan & Guillet, 2011).

2) The central position of user-generated content in social media has been determined. If we see social media as a vessel, user-generated content must be the cargo on this vessel. Furthermore, it has been known that social media sometimes could be called “user-generated communication” (Michaelidou, Siamagka & Christodoulides, 2011). This alias laterally indicates the importance of

user-generated content to social media. In broad sense, user generated content refers to all kinds of ways in which people use social media (Kaplan & Haenlein, 2010). Besides, accessibility, creativity and non-professionalism are three key features which distinguish user-generated content from other communication content (OECD, 2007). Obviously, the owners or the administrations of social media could hardly control this content and even its timing and frequency, since everyone is able to participant in the creation process of such content (Mangold and Faulds, 2009).

Classification of social media

According to the above definition, variety of applications and websites would be classified as social media. But there is no unique classification standard for different forms of social media (Kaplan & Haenlein, 2010). For example, NielsenWire (2010) regards Twitter and LinkedIn as social networking sites. On the other hand, Burton and Soboleva (2011) associate Twitter with micro-blogs while Mangold and Faulds (2009) further categorize LinkedIn into Business networking website.

In this situation, Kaplan and Haenlein (2010) realize the need of a systemic classification method for social media. They attempt to classify the existing types of social media by joint evaluating two key elements of social media: the media-related component (i.e. social presentation and media richness) and the social component (i.e. self-presentation and self-disclosure). The results are summarized in the table below:

Table 3-1 The classification of Social media

Type of Socia Media	Social presence Media richness	Self- presentation Self- disclosure	Description
Collaborative project	Low	Low	websites enabling the aggregation of community intelligence i.e. wikis and social bookmarking sites
Blogs	Low	High	websites allowing bloggers to share and discuss their experience with others through logs and comments i.e. blogs and micro-blogs (O'Connor, 2008)
Content communities	Medium	Low	websites aiming at sharing original or reprocessing content (Wunsch-Vincent & Vickery, 2007) e.g. Youtube, Flickr
Social networking sites	Medium	High	websites where users create personal profiles, connect, communicate, interact and build relationship with each other (O'Connor, 2008) e.g. Facebook, LinkedIn, Myspace
Virtual game worlds	High	Low	online platforms where users play role-playing games together with other users e.g. World of Warcraft
Virtual social worlds	High	High	platforms enabling users to experience a victual life and interact with other victual inhabitants as what they do in real life e.g. Second Life

Besides, Wunsch-Vincent and Vickery (2007) put forwards an additional type of social media, namely "Sites Dedicated for Feedback" (Chan & Guillet, 2011). Similar with other categories of social media, user-generated content also dominants the sites dedicated for feedback. However, such content is usually confined to a rather fixed topic by the site managers. MyStarbucksIdea, an official platform for users to post any ideas about Starbucks brand, is a living example of sites dedicated for feedback (Brown, 2010).

3.2 The marketing potential of social media

Social media: threat and opportunity

The recent years have witnessed a considerable rise of social media. In 2008, the percentage of social media users from the total Internet users in United States, Europe and Asia-Pacific is 70.2%, 74.6% and 60.6% respectively (comScore, 2008, 2009a, 2009b).

With the highly democratized platforms provided by social media, communication related to firms and firms' product is no longer wholly controlled by firms. The power of this user-generated media, somehow, has influenced the marketing and public relation activities of firms (Kietzmann, Hermkens, McCarthy and Silvestre, 2011). For example, in the Year of 2008, United Airlines broke

their passenger, Dave Carroll's guitar during the flight. Such service failure might be common for an airline company. However, unusually, Carroll created a video about this unpleasant experience and uploaded it onto YouTube. The video very quickly attracted 9.5 million audiences and even has been discussed on CNN Situation Room. On the other hand, United Airlines did not respond in any forms, while the unfavorable image of United Airlines went viral so that the company fell into a serious public relation crisis. This case illustrates that nowadays even though some firms keep ignoring social media, the potential impact of social media on corporate communication with the public could not be overlooked any more. It may be better for firms to embrace social media into their marketing strategy.

The above opinion seems quite true in the industry of luxury brands, where new technology including social media is always considered as an opportunity instead of a threat (Kim & Ko, 2012). The survey conducted by Kim and Ko (2010) confirmed that social media could strongly influence a brand's reputation. And DEI Worldwide (2008) concluded in their report that companies without social media in their online marketing strategies will lose an opportunity to reach customers, since majority of customers had seen social media as a reliable information source about product.

Recently, marketers in all kinds of industries have realized that social media is a necessary element of their companies' marketing strategies. According to the answers of 3000 marketers, an overwhelming majority (97%) confirmed their use of social media marketing and 86% respondents indicated social media was important for their business (Stelzner, 2013).

So far, we have some clues about several marketing functions of social media. The next step is to establish an overview of marketing potential of social media. And then we will continue look for the answer in regard of B2B companies, service industry and so on.

Overviews

In Chapter 2, we have positioned social media as a new channel of marketing communication. Unlike the traditional channels (e.g. print media, CDs or television), social media has dual attributes on communication: it enables companies talk to customers in traditional sense and particularly, it facilitates the communication between customers. For this reason, Mangold and

Faulds (2009) consider social media as a hybrid element of marketing communication. What's more, due to the technology base and media origin, social media communication is usually in real time in multiple media formats (e.g. text, picture and video) via variety delivery platforms (e.g. Facebook, Twitter and YouTube) (Mangold & Faulds, 2009; Wright & Hinson, 2008). With such hybrid nature, social media is likely to be endowed with more marketing potential than traditional marketing communication. We have summarized some of them according to academic articles and reports written by social media marketing practitioners:

1. Market research. Patino, Pitta and Quinones (2012) has pointed out that social media could be used as an effective tool for online market research, especially for the qualitative research. General speaking, the primary goal of market research is listening to customers. But it is probably expensive (Sawchuk, 2011). In the context of traditional one-to-one communication, seeking suitable customers may cost much. However, the advantage of social media is to make listening process open and cheap (Patino, Pitta & Quinones, 2012). Several surveys have indicated customers are turning to use social media instead of traditional ones to keep in contact with their social network (Patino, Pitta & Quinones, 2012). Social media now become platforms where customers congregate. Additionally, social media enables customers with similar interest to talk with each other via online communities freely (Woodall & Colby, 2011). This kind of conversation offers market researchers massive information through easily listening.

According to the above discussion, we point out three ways to conduct market research on social media platform (Mallon, 2012):

1) Watch and listen. Silent observation might be the simplest ways to use social media for market research. The only precondition is to find enough target objects—they may congregate on several online communities, but companies could be more active—build dedicated social media communities and attract customers to their communities.

2) Ask questions. Even though companies have little ability to control the customer-generated conversation, they could still shape the discussion (Mangold & Faulds, 2009). Asking is a fastest way to know the answer of certain question. In addition, customers may be further engaged by the question-answer process.

3) Conduct polls and surveys. It is a traditional way of market research. However, while conducting them on social media, market researchers will have the large number of respondents

and near real time responses.

2. *Enhancing customer equity.* Customer equity refers to sum of the profit customers could provide to a brand or a company during the existence of relationship with customers. It is driven by three key factors: value equity, relationship equity and brand equity (Lemon et al., 2001). According to Kim and Ko's quantitative study on luxury brand, social media marketing activities have positive and very significant impact on all three drivers. In other words, social media are most like to enhance customer equity.

As discussed earlier, one of the main features of social media is that it enables, frees and encourages the two-way communication between customers and brands without restriction on time, space or medium. In this respect, marketing communication is more about conversation between customers and marketers than one-way message sent by marketers to customers (Hanna, Rohm & Crittenden, 2011). This efficient communication facilitates brands and customers to better understand each other and work together to create new values (Kim & Ko, 2010). Additionally, since the content of such conversation usually is about useful information of the brand or product rather than direct advertisements, customers are more likely to be attracted and participate into the conversation (Kozinets et al., 2010). Moreover, customers would exchange their perception or ideas on certain brands or products during the conversation (Drury, 2007), so social media has also been considered as a word-of-mouth platform. According to our discussion in Chapter 2, positive word-of-mouth can increase customers' purchasing desire. And the "open, transparent and honest interaction" will improve the brands' relationship with customers, and hence, encourage customers' loyalty (Jantsch, 2008).

If companies want to use social media to enhance their customer equity to largest extend, they must first realize which feature of social media can create this marketing potential. Indeed, what does work in social media communication is compelling content made by companies and positive word-of-mouth generated by customers. The following is a brief example from a famous luxury brand – Burberry:

Example: In 2009, Burberry launched a dedicated social media website. On this platform, Burberry mainly posted content about the brand culture and stories in order to cultivate relationship with customers. The non-commercial but image-built message seemed work well. And as a direct result, Burberry's online sales increased immediately after the website was open

(Samsung Design Net, 2009).

3. *Enhancing promotional strategies.* Before the emergence of social media, marketers had already used Internet as a promotion tool. The main Internet marketing activities include sponsorships, paid searches, pop-ups, banner advertising and so on (Belch & Belch, 2007). Thackeray, Neiger, Hanson and McKenzie (2013) illustrated that the social media has increased the marketing potential of Internet to some extent. Chan and Guillet (2011) argued that social media marketing is a subset of Internet marketing, but it has brought some new marketing capacity other than the traditional online marketing activities. As we have explained earlier in this paper, it is massive user-generated content that makes social media marketing different from the conventional Internet Marketing. Neiger, Hanson and McKenzie (2013) have summarized the benefits of encouraging customers to become co-creators: 1. it can increase the customers' purchasing intent and brand loyalty (McKenzie et al., 2009); 2. The customers would be more willing to discuss the product or some relevant information with their friends. Additionally, since social media has enabled very fast dissemination to larger audiences, the power of viral marketing could be improved by the use of social media; 3. The promotional tactics generated by customers might be cheaper than those by professionals. 4. The customer-generated promotional strategies are more likely to resonate with other customers, as customers are the ones who understand themselves best.

In this regard, promotional strategies might be more successful if marketers properly use social media to update online marketing activities. The above is an example which indicates this marketing potential of social media.

Example: In 2006, PepsiCo's Frito-Lay division held a "Crash the Super Bowl" campaign for one of their products: Doritos. In this campaign, customers are asked to create Doritos advertisement and the best one would be displayed during Super Bowl XLI in 2007. Doritos set up a dedicated microsite for this campaign, where people could vote for their favorite ads and view the submission. As a result, Doritos attracted lots of attention from the public and its sales increased by 12% in 2007 (Janoff, 2013). Moreover, as Mukherjee, the marketing officer of Frito-Lay said "I have 25,000 ads in can...and they're free!" (Burstein, 2013), it might be the biggest bonus brought by this social campaign. In the years that followed, Doritos continued to hold this campaign, but they started to get more use of social media in spreading the campaign's message

and move “Crash the Super Bowl” from its dedicated microsite to Facebook. The number of participants was increasing and so did the campaign’s effect. In 2012, they received 5800 unique entries compared to 1000 in 2007. In essence, it is the social campaign and its customers-generated advertisement enabled by social media that has enhanced the promotion strategies of Doritos and led the product to great success.

In fact, the three marketing potentials of social media are not isolate but interrelated. It may be because most features of social media can influence marketing activities in different facets. For example, customer-generated content could be cost-efficient data for market research. And since it is very cheap, some marketers start to hold campaigns to use customer-generated content (e.g. customer-generated advertisement) as promotion tools. As a bonus, such social campaigns would also increase customers’ loyalty. So it is difficult to take a rigorous classification for the marketing potential of social media. Moreover, as the theory and practice of social marketing has been changing with each passing day, it is also hard to list all of the marketing potential related to social media.

In this regard, it is better to conduct concrete analysis on concrete problems. Since we have revealed in last Chapter, seaport is more like a service company. So we would like to focus our research on services companies in the next section, aiming at better fitting in the requirement of seaport marketing.

Marketing potential in service industries

Unfortunately, we could not find many professional papers concerning about the use of social media marketing in service industries. The most relevant academic researches normally pay attention in the field of hospitality, tourism and library industries (e.g. Ayeh, Leung, Au & Law, 2012; Chan & Guillet, 2011; Ayu & Abrizah, 2011). Among them, Chan and Guillet (2011) pointed out that social media could be used in service recovery (Burton & Soboleva, 2011), customer relationship development and brand loyalty building. Moreover, the same as we have discussed in Chapter 2, due to the intangibility of tourism product, customers desire more information, especially the “credible” word-of-mouth information to reduce their uncertainty in decision-making process. The platforms provided by social media just satisfy this demand of

customers (O'Connor, 2008).

Similarly, Amy (2011), president of a marketing consulting firm, revealed the marketing potential of social media in services industries and her points can be summed up as follows:

1) Informing customers: as the traditional print media, the primary function of social media is an information release platform. Social media can be reminders by posting service-related messages on a regular basis. However, since the information distribution through social media is more flexible and less restricted, customers can also benefit from real-time update information related to the service.

2) Improving customer service: social media can offer open communication channels where customers are easy to ask question or give feedback about services and companies can respond very quickly. In this way, the quality of service could be improved.

3) Lead generation: Being humanized (e.g. offer personal information or your hobbies) might open up a conversation with someone who has potential interest in your companies' services and develop a relationship with you. It can lead to referrals.

4) Education: social media can be used to educate customers about a "lifestyle" that indirectly related to the service offerings. For example, an insurance company can talk about safe driving through social media. It might be more efficient at marketing than directly selling services to customers.

To be more relevant with seaports, we attempt to find out the marketing usage of social media in transportation industry and airports. However, it seems that no academic literatures are available. So we change our focus on some progress made by the practitioners. The following are our main findings:

1. Federal Transit Administration (FTA) has supported a program to explore the use of social media in transportation industry. They have interviewed three marketers in transportation companies to get first-hand information¹. The three interviewees are Pauletta Tonilas from RTD Denver Regional Transportation District, Jim Allison – the multimedia managing producer of BART (Bay Area Rapid Transit) and Jody Feerst Litvak – the community relations manager of Metro Los Angeles County Metropolitan Transportation Authority.

During the interview, Pauletta revealed that they had realized the need to present in the social

¹ Source: YouTube, <http://www.youtube.com/watch?v=nJuARta4Qrk>. Retrieved 09-09-2013.

media, otherwise “others would be there and give information that not correct.” For doing this, they also disclosed the basic information, like the guideline and policies of RTD on Facebook and other social media platforms to identify and express their right images. Pauletta and Jim replied that they used social media to share information and communicate with the public. Jim said they would post the news of their company everyday onto Facebook, Twitter and so forth. Furthermore, Jody suggested that the manager of the companies’ social media should retain the interaction with customers – It will make no sense if you post something but you don’t go back to check it and respond the comment. Additionally, all of them regarded social media as a service recovery tool. According to this interview, it seems that transportation companies have already exploited the social media’s marketing potential in delivering information and interacting with the public.

2. Shubhdeep Pal (2011), head of operations and innovation at SimliFlying (i.e. an aviation marketing consultancy), conducted case studies on eleven benchmark airports to explore how airports engage on social media. He found that these airports have successfully used social media to enhance revenue, customer engagement and loyalty, customer services and crisis management.

To launch a social campaign is still a common way to engage customer within the eleven cases. For example, Changi Airport kicked off their shopping promotion with a massive dance in Terminal 3. This campaign attracted 400 performers and at that time over 200,000 audiences watched this campaign via YouTube. Other examples include Kuala Lumpur Airport’s iStyleKLIA campaign based on Facebook, Twitter, dedicated microsite and YouTube. In addition to hold social campaign for airports themselves, Boston Logan Airport also used its Facebook page to support several campaigns for its partner airlines.

Besides, in order to engage its followers and fans, Harrisburg Airport provided up-to-date information about some useful information like weather or delays together with articles, blogs about travel, aviation or local tourism on its Twitter and Facebook page. On the other hand, the real-time updates will become very crucial during the crises. For instance, during the snow and the volcanic ash cloud crises, Manchester Airport used Twitter as an important channel of communication to delivery timely and accurate messages to the public.

With the goal of improving customer service, London Gatwick Airport allowed customers to

tweet any issues and displayed the Twitter on a FIDS screen. So everyone can see the airport's responses and supervise their timeliness. Copenhagen Airport seemed to go one step further and create iPhone apps for airport navigation.

In general, according to the cases, airports did not satisfy with social media as a broadcast tool. Instead, they started to use social media to engage customers and create positive experience for them.

However, it might be argued that since the customers of airports, public transportation and other services industries are mainly individuals, the implications we have got so far are restricted on the sphere of B2C companies and may not be suitable for B2B businesses like seaport industry. In order to find more reliable reference for seaports, we will briefly review several social media articles on B2B companies in the next section.

Marketing potential in B2B companies – An overview

Brennan and Croft (2012) have conducted an exploratory research on the use of the large B2B companies' social media in high-tech industries. They found that B2B companies mainly used social media for content marketing and market research. Other usages include building business networking and increase sales. They also concluded that the use of social media was vital for B2B companies' brand strategies due to the three changes in B2B marketing: 1) information handling has become a key element of marketing (Naude & Holland, 2004); 2) the importance of relationship marketing has increased (Wilson & Vlosky, 1998); 3) Especially in high-tech industries, marketing activities has become market driving instead of marketing driven (Hills & Sarin, 2003). These findings has confirmed that social media can and do be used as a marketing tool for B2B companies. And the functions of social media on B2B companies are fundamentally the same as those of other businesses we have analyzed earlier.

Moreover, according to the survey on 1000 UK B2B SMEs(Michaekidou, Siamagka and Christodoulides, 2011), building relationship with customers has been determined as B2B companies' one the of most important usages of social media. Social networking sites (SNS) can specially meet this goal due to their capacity in enhancing social network in online environment.

B2B companies are more likely to adopt SNS such as Facebook, Twitter and LinkedIn rather than other social media platform (Shih, 2009). In this regard, we would like to take Facebook, one of the most popular SNS (NielsenWire, 2010) as samples to conduct our content analysis in next chapter, aiming at specifically evaluate the marketing usage of seaport social media.

3.3 Measuring the marketing usage of social media

Benchmark building

Before starting to measure the marketing usage of social media, we should determine what marketing usage to measure. As there is no available reference telling us what the marketing potential of seaport social media, we would like to first build a benchmark for seaport social media marketing according to the results of the explorative research we have done above. We have explored the marketing usage of social media from variety sources: academic literatures, articles and reports created by marketing counselors and practitioners and even a video of an interview supported by FTA. It leads the results to be slightly scrappy, so we integrate several usages with homogenous elements and attempt to summarize the marketing usage of social media and their implementations fundamentally:

1. Market research: social media enables the companies to reach their customers easier. As mentioned above, listening, asking questions to customers and conducting polls and survey are three forms of market research on social media.
2. Information disclosure: the same as other marketing communications, it is a basic function of social media. However, spreading message via social media is more flexible over other channels. The type of the message could be the basic information about the companies (e.g. mission, vision), the company-related news, the changes or updates of services or product and reminder of up-coming event or schedule. In general, companies could use social media to broadcast the “right” information and prevent the spread of rumors.
3. Relationship marketing: customer relationship has proven to be very crucial for service marketing and business-to-business marketing. It is also a precondition for achieving more advanced marketing effects of social media, such as enhancing promotion strategies or customer equity. In general, social media conducts relationship marketing by attracting, engaging and

retaining customers. The practice includes posting interesting content (e.g. brand culture and brand story) in diverse forms (e.g. pictures, videos and audio), developing online games or applications, encouraging conversations, launching social campaigns and so on.

4. Service recovery: with social media platform, marketers are able to respond more quickly to customers' complaints, questions or suggestions about their companies or their product. Take remediation in time might improve the customer experience and prevent the damage of negative word-of-mouth.

Constructing the measuring metric

Among variety of social media website, the popularity of Facebook has also extent to B2B companies. According to B2B and the Association of National Advertisers (2009), by June 2009, about 60% of B2B companies had started the use of Facebook. This fact supports our decision that the content analysis will focus on Facebook.

Opening a Facebook page is one of the most common and successful ways for a company to make their effort on Facebook marketing (Threatt, 2009). Facebook pages enable companies to create public presence and post all kinds of information on Facebook. Once new messages are posted, the fans of the page will receive the updates by Newsfeed. Apart from "Cover" and "Profile pictures", "About", "Custom Tab" and the "Wall" are three important parts of a Facebook page. Their main functions are listed as follows:

About: the place where companies can establish definite profile including their mission, vision and other general information.

Custom Tab: customizing page tabs which companies can use to highlight their own Applications alongside the standard tabs, such as "Photos" and "Likes".

Wall: the place where the messages and multimedia content post by companies or others are listed in the form of timeline.

The "Wall" postings have two sources: post by pages and post by others. However, the owner of the pages can choose to hide postings by others on page timeline, to turn off the ability for people to post on page timeline or to remove the "Recent Posts by others" box (Facebook, 2013a). If companies conduct these settings, their pages will be considered not fully realizing the marketing potential of user-generated content and two-way communication.

Everyone can “Comment” or “Like” the postings. Whereas “Comment” can be easily understood, “Likes” refers to “a way to give positive feedback or to connect with things users care about” (Facebook, 2013b). When someone appreciates the postings or the page, he or she could press the “Like” button without comment. Both pages and anyone else can “Comment” or “Like” any postings. Together with “Wall” post, “Comment” and “Like” are main means users and companies communicate on Facebook pages.

The frequency of the “Wall” postings, “Comment” and “Like” indicate the intensity of the communication on Facebook. Inspired by the works of Ayu and Abrizah (2011), we will collect the communication data from the month of June, July and August 2013, and evaluate the intensity by the average postings per working day (i.e. 20 working days per month), and per week (i.e. 4 weeks per month). We take average “Wall” post by page as an example to show our calculate process:

$$\text{Average portings by page (daily)} = \frac{\#.\text{postings by page in June, July \& August}}{60 \text{ working days}}$$

$$\text{Average postings by page (weekly)} = \frac{\#.\text{postings by page in June, July \& August}}{12 \text{ weeks}}$$

If the average value is larger than one, we assume the page updates “Wall” postings every day or every week.

Due to the limitation of our research method, we could only observe the marketing usage of seaport Facebook from outside. Therefore, it may be impossible for us to determine every marketing implementation. For example, we have known listening is an important way to conduct market research on social media. But marketers usually keep silent during the process. As a result, we are not able to tell whether the owners of Facebook pages are listening to their audiences or not. So in our evaluation metric, we only include the checkpoints where we could get available proxy or indicators. Based on the works of Ayu and Abrizah (2011) and Hoffman and Fodor (2010), we establish the evaluation table in table 3-2 (next page).

As we have noted above, market research and social campaign are less likely to be “daily” activities, so we extend our search range on these two issues - from the opening of certain

Facebook page to September 6, 2013. For other “Wall” related questions, all of the data is collected across the timeline from June 1, 2013 to August 31, 2013.

For each question, a “Yes” answer will get 1 point, a “No” answer will be scored 0. There are 35 questions in total, so the perfect score is 35. The closer one Facebook page’s score is to 35, the more marketing potential of Facebook certain port has realized.

In the next chapter, we will apply these evaluation criteria onto our selected seaports worldwide.

Table 3-2 Evaluation Criteria

Functions and implementations	Checkpoints
A. Market research	
1.Ask question*	Whether the page has posted questions on the "Wall"
2.Poll and survey	Whether the page has Apps for either poll or survey in "Custom Tabs"
<i>Total (2 points)</i>	
B.Information disclosure	
1.General information	Whether the page has posted the seaport's vision, mission and contact information in "About"
2.News and Service updates	Whether the page has posted the seaport's news or/and service updates on the "Wall"
3.Event reminder	Whether the page has posted the seaport-related event on "Wall" or on "Custom Tabs"
<i>Total (3 points)</i>	
C. Relationship marketing	
1. Brand story or culture	Whether the page has posted the content about seaport's brand story or culture on the "Wall"
2. Multimedia content	Whether the page has shared photos, videos, audio or interesting articles on the "Wall"
3. Entertainment Apps	Whether the page has entertainment Apps such as online game in "Custom Tabs"
4. Social campaign*	Whether the page has launched or supported social campaigns
5. Two-way communication	Whether the page sent any "Wall" posts in June, 2013
	Whether the page sent any "Wall" posts in July, 2013
	Whether the page sent any "Wall" posts in August, 2013
	Whether the page sent any "Wall" posts at least once a week
	Whether the page sent any "Wall" posts daily
	Whether the status posted by page received "Like" at least once a week
	Whether the status posted by page received "Like" daily
	Whether the status posted by page received "Comment" in June, 2013
	Whether the status posted by page received "Comment" in July, 2013
	Whether the status posted by page received "Comment" in August, 2013
	Whether the status posted by page received "Comment" at least once a week
	Whether the status posted by page received "Comment" daily
	Whether the page allows others to send "Wall" posts**
	Whether others sent any "Wall" posts in June, 2013
	Whether others sent any "Wall" posts in July, 2013
	Whether others sent any "Wall" posts in August, 2013
	Whether others sent any "Wall" posts at least once a week
	Whether others sent any "Wall" posts daily
	Whether the status posted by others received "Like" at least once a week
	Whether the status posted by others received "Like" daily
Whether the status posted by others received "Comment" in June, 2013	
Whether the status posted by others received "Comment" in July, 2013	
Whether the status posted by others received "Comment" in August, 2013	
Whether the status posted by others received "Comment" at least once a week	
Whether the status posted by others received "Comment" daily	
<i>Total (29 points)</i>	
D. Service recovery	
	Whether the page responded the users' complaints, questions or suggestion with 24 hours
<i>Total (1 point)</i>	
Total Score(35 points)	

* search from the start date of the Facebook page

** according to the result searched in September 6, 2013

4. Seaport social media

4.1 Overviews of the use of social media by ports

The use of social media in world major ports

In order to have a general idea of the use of social media in seaport industry, we first employ the world top 100 container ports² as proxy of world major ports.

In most cases, ports will make the awareness of their social media on their official website. So for every port, we access to its website homepage and give a “Yes” mark to certain kind of social media when we find relevant icons, symbols or other indications of the use of social media. The aim of this exploration is to get a briefly understanding of the use of social media by seaports in an efficient way. This survey is conducted on August 28th, 2013 and Table 4-1 records the information of the ports which have clearly indicated their use of at least one social media platform:

Table 4-1 The use of social media of top 100 ports in 2011

Rank	Port	Country	Facebook	Twitter	LinkedIn	Youtube	Other
2	Singapore	Singapore	Yes				
10	Rotterdam	Netherland	Yes	Yes	Yes	Yes	Hyves
13	Port Klang	Malaysia	Yes	Yes			
14	Hamburg	Germany		Yes			
16	Los Angeles	US	Yes	Yes			
20	Long Beach	US	Yes	Yes	Yes		Flickr
27	Tokyo	Japan	Yes	Yes			
33	Jeddah	Saudi Arabia	Yes	Yes		Yes	
45	Durban	South Africa	Yes	Yes			
50	Melbourne	Australia		Yes			
54	Keelung	Taiwan	Yes				
57	Oakland	US	Yes	Yes			
58	Incheon	South Korea	Yes	Yes			
61	Zeebrugge	Belgium		Yes	Yes	Yes	google+/Blog
65	Seattle	US	Yes	Yes		Yes	
66	Barcelona	Spain	Yes	Yes			
67	Virginia	US	Yes	Yes		Yes	
68	Manzanillo	Panama	Yes				
69	Houston	US	Yes	Yes	Yes	Yes	
74	Manzanillo	Mexico	Yes	Yes			
77	Callao	Peru	Yes				
81	Dammam	Saudi Arabia	Yes	Yes		Yes	
82	Alexandria	Egypt	Yes	Yes		Yes	
83	Tacoma	US	Yes	Yes		Yes	Flickr
88	Karachi	Pakistan	Yes	Yes		Yes	
90	Charleston	US	Yes	Yes	Yes	Yes	
97	Haifa	Israel	Yes			Yes	
99	Penang	Malaysia	Yes	Yes		Yes	Flickr/Blog
100	Mersin	Turkey		Yes			
Total	29		25	24	5	13	

The results reveal that there are only 29 ports had shown their use of social media in their official

² Issued by Containerisation International – Top 100 Container Ports 2012.

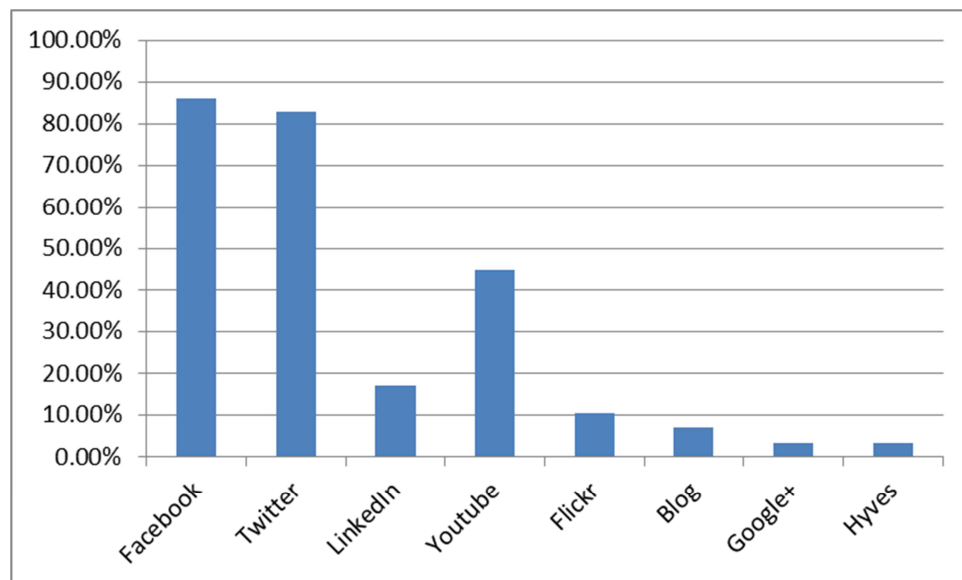
websites before August 28th, 2013. In other words, we can conclude that at least 29 % of the world major ports have stepped into the era of social media.

However, the use of social media shows a scattered pattern among the world major ports, whereas North American ports, or more accurately, the ports in US account for the biggest proportion (8 out of 29).

Besides, the majority of the 29 ports (22 out of 29) achieve the integrated use of more than one social media website. Three ports, Port of Rotterdam, Port of Zeebrugge and Port of Penang, even conduct as many as five social media website.

For different kinds of social media websites, Facebook and Twitter seem to be most frequently used by ports. In the 29 container ports which have made use of social media website, 25 ports have provided the links of their official Facebook pages a on their website, while 24 ports indicate their use of Twitter. Figure 4-1 shows the percentage of different social media website use among the 29 ports:

Figure 4-1 The percentage of different social media website use



We can see, except for Facebook and Twitter, more than 40 percent of the 29 ports choose to use YouTube, and less than 20 percent of these ports have opened their LinkedIn accounts. Other platform, like Flickr or Google+, seems not to be often used by ports. As only no more than 10 percent of the 29 ports have used them. Therefore, we could conclude that Facebook, Twitter, YouTube and LinkedIn are four mainstream social media websites used by seaports around the world. And in the next step, our research will focus on the use pattern of these four popular

social media websites in selected seaports.

The use of social media in European, North American and Asian ports

In previous section, there are some signs that the use pattern of social media is unevenly distributed among the world's major ports. In order to make easier comparison and conduct thorough analysis, we select ten largest container ports from three representative maritime trade areas in the world: Europe, North America and Asia respectively, as our study samples. We choose largest ports in the three continents because of their leading position to their local economy, regional economy or even national economy. In this regard, these port authorities and the local governments are more likely to conduct intensive marketing activities for port prosperity. Therefore, we expect the performance of the thirty ports can represent some of the best seaport social media practices in the world.

The thirty ports and their basic information are listed in Table 4-2, Table 4-3 and Table 4-4 .The size of the ports is evaluated by their throughput of Year 2011 in the unit of TEU³.

Table 4-2 Top 10 ports in Europe

Rank	Port	Country	TEU
1	Rotterdam	Netherlands	11,876,921
2	Hamburg	Germany	9,021,800
3	Antwerp	Belgium	8,664,243
4	Bremerhaven	Germany	5,915,487
5	Valencia	Spain	4,327,371
6	Algeciras	Spain	3,602,631
7	Felixstowe	UK	3,519,000
8	Duisburg	Germany	2,500,000
9	St Petersburg	Russia	2,365,174
10	Marsaxlokk	Malta	2,360,489

Table 4-3 Top 10 ports in North America

Rank	Port	Country	TEU
1	Los Angeles	US	7,940,511
2	Long Beach	US	6,061,099
3	New York/New Jersey	US	5,503,486
4	Savannah	US	2,944,684
5	Vancouver	Canada	2,550,750
6	Oakland	US	2,342,504
7	Seattle	US	2,030,000
8	Virginia	US	1,918,029
9	Houston	US	1,890,000
10	Manzanillo	Mexico	1,762,508

³ According to the data provided by Containerisation International – Top 100 Container Ports 2012

Table 4-4 Top 10 ports in Asia

Rank	Port	Country	TEU
1	Shanghai	China	31,700,000
2	Singapore	Singapore	29,937,700
3	Hongkong	China	24,384,000
4	Shenzhen	China	22,569,800
5	Busan	South Korea	16,184,706
6	Ningbo	China	14,686,200
7	Guangzhou	China	14,400,000
8	Qingdao	China	13,020,000
9	Tianjin	China	11,500,000
10	Kaosiung	Taiwan	9,636,289

The following three tables highlight the use pattern of mainstream social media within the selected thirty ports. In last section, we only judge whether a port has started its use of certain social media website by corresponding indicators on the port's official website. However, in case some ports have opened one or several mainstream social media websites, but they choose not to make awareness of their social media on their official websites, we further conduct the second round exploration on the thirty ports. It is done by a search on Facebook, Twitter, YouTube and LinkedIn, using the ports' English names and names in their local language (e.g. Port of Hamburg and Hafen Hamburg). We use "✓" to distinguish the newly found seaport social media website in the second round study, while a "Yes" stick to represent the presence of certain social media on ports' official website.

Table 4-5 The use of social media of top 10 ports in Europe.

Port	Facebook	Twitter	Youtube	LinkedIn
Rotterdam	Yes	Yes	Yes	Yes
Hamburg	✓	Yes	✓	✓
Antwerp	✓	✓	✓	✓
Bremerhaven				
Valencia				
Algeciras	✓	✓	✓	
Felixstowe		✓	✓	
Duisburg				
St Peterburg				
Marsaxlokk				
Total	4	5	5	3

Europe: The location of ten European ports could be roughly divided into Northern Europe and Mediterranean. Apart from Valencia (Spain), Algeciras (Spain) and Marsaxlokk (Malta), all the rest

seven ports lie to the northern part of Europe. According to the table, the Top 3 ports (Rotterdam, Hamburg and Antwerp) have made use of all the four mainstream social media websites, while only Port of Rotterdam has fully informed this situation on official website. Besides, Port of Felixstowe has opened its Twitter and YouTube channel. Port of Algeciras is the only Mediterranean seaport which has used social media and it opened every mainstream social media website but LinkedIn.

In general, Twitter and YouTube seem the most popular social media platforms in Europe. And it is likely that the fierce competition in North Europe, especially within the Hamburg – Le Havre region, has encouraged the utilization of social media as new marketing tools of ports.

Table 4-6 The use of social media of top 10 ports in North America.

Port	Facebook	Twitter	Youtube	LinkedIn
Los Angeles	Yes	Yes	√	√
Long Beach	Yes	Yes	Yes	√
NY/NJ			√	√
Savannah			√	
Vancouver	√	√	√	√
Oakland	Yes	Yes	Yes	√
Seattle	Yes	Yes	Yes	√
Virginia	Yes	Yes	Yes	√
Houston	Yes	Yes	Yes	Yes
Manzanillo	Yes	Yes		
Total	8	8	9	8

North America: Social media marketing of ports might be most developed in North America, as all the Top 10 seaports in this region have used social media more or less. Besides, nine ports have involved in at least two types of social media websites. YouTube have been used most frequently according to the results, the rest three social media websites are all used by eight ports respectively. However, Port of Houston seems to be the only port which has indicated its LinkedIn account on official website.

Table 4-7 The use of social media of top 10 ports in Asia.

Port	Facebook	Twitter	Youtube	LinkedIn
Shanghai				
Singapore	Yes*		√	
Hongkong				
Shenzhen				
Busan	√	√		
Ningbo				
Guangzhou				
Qingdao				
Tianjin				
Kaohsiung				
total	1*	1	1	0

Asia: The largest container ports in Asia are in an entirely different situation from top ten ports in North America. While social media utilization ratio of North American ten largest container ports has reached to 100 percent, there are only two port (Port of Singapore and Port of Busan) have indicated that they have made use of Facebook. Moreover, we find that the Facebook page shown on Port of Singapore's homepage is accurately dedicated to Ministry of Transport, Singapore. So it is even hardly considered as a seaport Facebook page, meaning Port of Busan is the only Facebook users among Asian Top 10 container seaports.

The problem maybe lies in that the three most popular social media websites: Facebook, Twitter and YouTube are unfortunately blocked within mainland China, whereas Chinese mainland ports take a lion share of Top 10 Asian container ports (6 out of 10). But it might only be a possible reason why none of the six Chinese mainland container ports has launched their Facebook, Twitter or YouTube. We also explore whether these ports have taken action on any "Chinese version" social media, like the social network website: renren; the micro blog website: weibo, the video sharing website: youku or the business networking website: dajie, but end up with nothing, either. The fact tells us that the ports in mainland China might have not realized the marketing potential of social media or even the importance of port marketing yet.

Nevertheless, the blockage of mainstream social media websites in mainland China, more or less will affect the fairness of the comparison made among the three areas. In order to compare on a level playing field, we again select ten largest container ports from Asia, excluding the ports in mainland China. The ten ports and their use of social media are shown in the two tables below:

Table 4-8 Top 10 ports in Asia (excluding mainland China)

Rank	Port	Country	TEU
1	Singapore	Singapore	29,937,700
2	Hong Kong	China	24,384,000
3	Busan	South Korea	16,184,706
4	Kaohsiung	Taiwan	9,636,289
5	Port Klang	Malaysia	9,603,926
6	Tanjung Pelepas	Malaysia	7,500,000
7	Leam Chabang	Thailand	5,731,063
8	Tanjung Priok	Indonesia	5,617,562
9	Ho Chi Minh	Vietnam	4,674,326
10	Tokyo	Japan	4,639,664

Table 4-9 The use of social media of top 10 ports in Asia (excluding mainland China)

Port	Facebook	Twitter	Youtube	LinkedIn
Singapore	Yes*		√	
Hong Kong				
Busan	√	√		
Kaohsiung				
Klang	Yes	Yes		
Tanjung Pelepas	√			√
Leam Chabang			√	√
Tanjung Priok	√			
Ho Chi Minh				
Tokyo	Yes	Yes		
total	5*	3	2	2

Asia (excluding mainland China): From the results we can see, within the re-selected ten Asian container ports, only Port of Hong Kong, Port of Kaohsiung and Port of Ho Chi Minh have no signs of using social media yet. Facebook is the most often used social media website among Asian ports. However, four port social media participants have not announced their existence in the world of social media on official websites.

Table 4-10 The number of social media used by every Top 10 container ports in three areas

NO. of Social Meida	European Top 10 ports	North American Top 10 ports	Asian(excluding mainland China) Top 10 ports	Total
0	5	0	3	8
1	0	1	2	3
2	1	2	5	8
3	1	0	0	1
4	3	7	0	10

Table 4-11 The category of social media used by Top 10 container ports in three areas

Category of Social media	European Top 10 ports	North American Top 10 ports	Asian(excluding mainland China) Top 10 ports	Total
Facebook	4	8	5	17
Twitter	5	8	3	16
LinkedIn	3	8	2	13
Youtube	5	9	2	16

In general, our findings so far are summarized in the above two tables: 1) even though only five out of Top ten European ports have used social media, these five ports are at least operating two social media. On the other hand, the number of ports using social media among Asian top then ports (excluding mainland China) has excess that among Europe, but the Asian ports only choose to have two social media platforms at most. Additionally, seven out of North American Top 10 container ports have registered their accounts in all the full mainstream social media websites.

2) Facebook has seventeen port users within the thirty ports in total, followed by Twitter and YouTube, which is used by sixteen ports. LinkedIn is a little less used by ports. The results are not that different from the ones we get from the quick survey on the World Top 100 container ports.

Overall, twenty-two ports have shown the presence of their social media in their official website homepage.

In this section, we attempt to access to every social media website of the twenty-two ports. Some basic information, for example, the start date or the number of Likes/followers/subscribe of certain port social media website, is collected during the process (the data is updated in November 1st, 2013). The results are listed in Table 4-12 below:

Table 4-12 The basic information of every seaport social media website

port	Facebook		Twitter			LinkedIn			YouTube	
	Start date	Like	Start date	Tweets	Follower	Start date	Updates	Follower	Start date	Subscribe
Rotterdam	May 2012	1134	Aug. 2010	4336	8497	Not found	21	6721	Mar. 2009	368
Hamburg	Jan. 2011	904	July 2010	157	674	Not found	3	21	Feb. 2013	8
Antwerp	Sep. 2013	247	Mar. 2009	252	2000	Not found	30	2464	Jan. 2009	88
Algeciras	Apr. 2010	611	Feb. 2013	28934	1906				Apr. 2008	20
Felixstowe			July 2011	19288	1024				Not found	1
Los Angeles	Jan. 2009	13000	Aug. 2009	468	6466	Not found	2	1461	Feb. 2010	125
Long Beach	July 2008	5229	Sep. 2008	2444	8922	Not found	0	1367	Jan. 2008	444
NY/NJ						Not found	0	7228	Jan. 2008	383
Savannah									Jan. 2013	13
Vancouver	Aug. 2013	434	Sep. 2010	1867	3143	Not found	3	1127	Not found	211
Oakland	Jan. 2011	3148	July 2009	754	2479	Not found	1	1004	Nov. 2008	26
Seattle	June 2009	2148	Apr. 2010	805	3682	Not found	2	2548	July 2009	158
Virginia	July 2010	1334	Mar. 2012	5115	2827	Not found	6	473	Jan. 2011	28
Houston	Oct. 2009	1720	June 2011	684	1966	Not found	12	2281	July 2012	25
Manzanillo	Mar. 2012	876	Oct. 2011	3	322					
Singapore									Oct. 2013	0
Busan	Nov. 2011	28	Nov. 2011	74	94					
Klang	July 2012	489	Not found	Not found	Not found					
Tanjung Pelepas	Jan. 2011	136				Not found	0	339		
Leam Chabang						Not found	200+	5	Aug. 2011	3
Tanjung Priok	May. 2013	1								
Tokyo	Dec. 2012	654	Jan. 2013	982	6635					

In particular, even though Port Klang shows the presence of their Twitter account, we remain failing in attempting to access to this Twitter via the linkage provided on the port's official website. Twitter always states that the page for Port Klang does not exist when we click on the link (till November 1, 2013). We could not know the exact reason for it, but what we are sure is that currently Port Klang is not using Twitter as a marketing tool, even on minimum level. So, at this moment, among the thirty ports, only fifteen ports are really using Twitter.

Moreover, we have not got any information about the start date of the ports' LinkedIn pages. Instead, we have explored the "Recent Updates" of each seaport's LinkedIn page. We find that, for most ports, the number of "Recent Updates" is very limited, comparing with the number of their followers. And majority of the updates are the port recruitment information. However, it is strange that Port of Leam Priok's LinkedIn has more than 200 status updates, even though it only has five audiences in total.

Overall, for every port in Table 4-12, we first compare the start date of all this port's social media and take the earliest one as the time when the certain port began to realize the value of social media. The results are shown in Table 4-13:

Table 4-13 The date ports start to use social media

port	Category of social media	Start date
Rotterdam	YouTube	Mar. 2009
Hamburg	Twitter	July 2010
Antwerp	YouTube	Jan.2009
Algeciras	YouTube	Apr.2008
Felixstowe	Twitter	July 2011
Los Angeles	Facebook	Jan. 2009
Long Beach	Youtube	Jan. 2008
NY/NJ	Youtube	Jan.2008
Savannah	Youtube	Jan.2013
Vancouver	Twitter	Sep.2010
Oakland	Youtube	Nov. 2008
Seattle	Facebook	June 2009
Virginia	Facebook	July 2010
Houston	Facebook	Oct. 2009
Manzanillo	Twitter	Oct. 2011
Singapore	YouTube	Oct.2013
Busan	Facebook/Twitter	Nov.2011
Klang	Facebook	July 2012
Tanjung Pelepas	Facebook	Jan.2011
Leam Chabang	YouTube	Aug.2011
Tanjung Priok	Facebook	May.2013
Tokyo	Facebook	Dec. 2012

Compared with that of other social media websites, the use of Facebook and YouTube by seaports might have the longest history: Nine out of the twenty-two ports respectively have chosen to create their own Facebook page or YouTube channel as their first trial in the world of social media. So we have reason to believe that the ports may have more practical experience or behave more maturely in exploiting the marketing potential of Facebook or YouTube, than that of other social media websites.

Besides, the YouTube channels of Port of Long Beach and Port of New York & New Jersey are likely to be the earliest seaport's social media platform among all the social media currently used by the twenty-two ports. Port of Busan started its Facebook and Twitter nearly at the same time in 2011, while the rest four ports: Port of Hamburg, Port of Felixstowe, Port of Vancouver and Port of Manzanillo stepped into the era of social media by opening their official Twitter account.

Table 4-14 the start year of using social media and the region

Start Year Region	2008	2009	2010	2011	2012	2013	Total
EU	1	2	1	1	0	0	5
North America	3	3	2	1	0	1	10
Asia	0	0	0	3	2	2	7
Total	4	5	3	5	2	3	22

The time of every port to initiate their social media seems different among the ports in Europe, North America and Asia. The beginnings of social media use of North American and European ports are mainly from Year 2008 to Year 2011. However, the development of ports social media seems in Asia seems one step behind North America and Europe: the earliest Asian seaport social media- Port of Tanjung Pelepas's Facebook was started in the beginning of Year 2011. After that, the number of Asian ports with social media website has increased dramatically.

Apart from the information about the start date of every seaport's social media, the overall "Like", followers or subscribes, all these different names actually have similar meaning- they represent the social media users who are interested in, appreciate or enjoy certain social media website and feel like receiving the information updated in the site or interacting with the owner and other users of the site. To some extends, "Like", followers and subscribes can reflect the efficiency of the social media communication. Since the more followers one social media website has means the more audience the social media website communicates with at one time (Burton, 2011). However, as our data involves in the four mainstream social media websites for twenty-two ports in total, we attempt to summarize the relevant information in Table 4-15 below:

Table 4-15 Summary of "Like", Followers and Subscribes

	NO.	Min	Max	ST.DEV	AVE.	Median
Facebook - Like	17	1	13000	3060	1888	876
Twitter - Follower	15	94	8922	2797	3375	2479
LinkedIn - Follower	13	5	7228	2246	2080	1367
YouTube - Subscribe	16	0	444	148	119	27

According to the figures, the number of these seaports' social media audience varies hugely, from 0 (Port of Singapore's YouTube) to 13000 (Port of Los Angeles's Facebook). On average, Twitter seems have the largest amount of audience (3375 followers in average) than other social media

websites used by ports. It means Twitter may have high potential for reaching the customers of ports. LinkedIn has the second largest audience on average. However, as mentioned above, the communication on ports' LinkedIn is rather limited in terms of quantity and content.

Besides, it is not very surprising that Facebook has the third most (1888) audience on average. Furthermore, the standard deviation of audience on ports' Facebook is the largest among all the four categories of seaport social media websites. It means, somehow, the number of audience for every one of the seventeen ports' Facebook is more widely dispersed.

However, we are not satisfied with making simply comparison in terms of start date or the number of audience of seaport social media. In order to further understand to what degree seaports have realized the marketing potential of social media, we think it will be more meaningful to look at what the seaports have really done on their social media websites. As mentioned earlier in this paper, we would like to conduct content analysis on these seaports' Facebook. The advantages of choosing Facebook are summarized as follows:

1. The existing study on Facebook marketing is more intensive than the marketing activities on other social media. So it can give us more reference when the research is conducted on the seaport Facebook. And Facebook is used most frequently by the Top 10 container ports in North America, Europe and Asia (exclude mainland China). Therefore, our study samples could include the largest number of seaports to the extent possible.
2. As we have observed above, the ports which have started to use social media most often selected Facebook as their first social media website. With relatively longer experience on using Facebook, the certain ports are expected to manage their Facebook page in more mature ways.
3. Compare with Twitter and YouTube, the length and the form of the content posted on Facebook "Wall" has less limitation. Moreover, unlike Twitter, Facebook has additional features which will facilitate our research. For example, in the "Custom Tab" on Facebook page, we can easily determine whether the port has developed any interesting applications to interact with their customers. Since Facebook allows the owner of the pages to turn off the ability for other people to post on pages, we can get to know certain port's attitude to user-generated content very straightforward.

So in next section, we will specially study the use of Facebook page of the ports in the three areas, with the help of the Evaluation Criteria we have built in the end of Chapter 3.

4.2 Content analysis: The use of seaport Facebook

Score the seaport Facebook pages

Our major data was collected between September 22nd, 2013 and September 27th, 2013, from the ports' Facebook pages. However, we remove the seaport Facebook pages which have opened less than one year or performed very inactively across the time from our research. The deleted six seaport Facebook pages and the specific reasons are listed as follows:

1. Port of Hamburg: it performs very inactive, only updated once in 2013.
2. Port of Antwerp: it started very recently, just in September, 2013.
3. Port of Vancouver: it started very recently, just in August, 2013.
4. Port of Busan: it performs very inactively, only updates once in 2013.
5. Port of Tanjung Pelepas: it performs very inactively, even no updates in this year.
6. Port of Tanjung Priok: it started very recently and performs very inactive, only two updates in total.

However, the six port Facebook pages have one thing in common, that is, their existence are all determined in our second round study, meaning these ports' Facebook pages have not shown their presence on the ports' official websites. For the inactive seaport Facebook pages, it reflects that these ports have not paid enough attention on their Facebook or even "abandon" their Facebook for years. For the newly-opened seaport Facebook pages, their ports may not have enough time to make more awareness of their Facebook yet. However, one can also conclude that some large seaports, like Port of Antwerp and Port of Vancouver, have just started using Facebook as a communication tool.

Then our research is proceeding on the rest eleven seaports by following five steps:

1. We find out the link of the port's Facebook page on this port's official website or by ourselves and entered in.
2. We read the content in "About" to judge whether the port had released its mission, vision and contact information.

3. We explore the “Custom Tab” to see whether the port had “Event”, survey applications or entertainment applications other than the standard tabs.

4. We look at the “Wall” to determine whether the owner of this page allows users to post their own content onto the “Wall”. After that, we recorded the number of Comment and “Like” of every “Wall” update which the port and the users (if they are allowed) posted between June 1st, 2013 and August 31st, 2013. We also paid our attention on the content of the “Wall” postings during the three-month period to evaluate the page’s performance on the relevant checkpoints.

5. In the final step, we look for the clues about social campaigns and market research from the first posting on this Facebook page to its latest update.

For all the eleven seaport Facebook pages, the scoring of every checkpoint in our evaluation criteria does depend on the data we collected. The results are shown in Table 4-16 below.

In general, we evaluate the use of seaport Facebook pages in four facets, namely Market research, Information disclosure, Relationship marketing and Services recovery.

In “Market research”, it was found out that only two ports (i.e. Port of Virginia and Port of Rotterdam) have attempted to ask their (potential) customers’ opinion on the “Wall”. However, the ways in which the two ports asked question were quite different: Port of Virginia’s question was in form of multiple choices, while Port of Rotterdam used open-ended questions to ask their Facebook page users’ view of the port infrastructure and got many replies in “Comment”. On the other hand, none of the ports has been found the use of survey-related Apps on their Facebook pages.

Additional findings: Facebook may have done seaports a favor by supporting the offline survey. For example, in March 7th, 2013, Port of Long Beach posted an announcement of neighborhood get-together on Facebook “Wall”. The neighborhood get-together is a meeting held by the port authority to exchange each other’s opinion with the residents in the port area about Port of Long Beach’s project, security and air quality etc.

Table 4-16 The score broad of eleven seaports' Facebook pages

Port	Los Angeles	Long Beach	Oakland	Seattle	Virginia	Houston	Manzanillo	Klang	Tokyo	Rotterdam	Algericas
A. Market reaserch (2 points)											
1. Ask question	0	0	0	0	1	0	0	0	0	1	0
2. Poll and survey	0	0	0	0	0	0	0	0	0	0	0
Total	0	0	0	0	1	0	0	0	0	1	0
B. Information disclosure (3 points)											
1. General information	1	0	1	1	1	1	1	1	0	0	1
2. News and service updates	1	1	1	1	1	1	1	1	1	1	1
3. Event reminder	1	1	1	1	1	1	0	1	1	1	1
Total	3	2	3	3	3	3	2	3	2	2	3
C. Relationship marketing (29 points)											
1. Brand or culture	1	0	1	0	1	0	0	0	0	1	0
2. Multimedia content	1	1	1	1	1	1	1	1	1	1	1
3. Entertainment Apps	0	0	0	0	0	0	0	0	0	1	0
4. Social campaign	0	1	0	0	1	0	0	0	0	0	0
5. Two-way communication (25 points)											
post by port-June	1	1	1	1	1	1	1	1	1	1	1
post by port-July	1	1	1	1	1	1	1	1	1	1	1
post by port-August	1	1	1	1	1	1	1	1	1	1	1
post by port-weekly	1	1	1	1	1	1	1	1	1	1	1
post by port-daily	0	0	0	0	1	0	0	0	0	0	0
"Like" on the port's posts-weekly	1	1	1	1	1	1	1	1	1	1	1
"Like" on the port's posts-daily	1	1	1	1	1	1	1	1	1	1	0
comment on the port's posts-June	1	1	1	1	1	1	1	1	1	1	1
comment on the port's posts-July	1	1	1	1	1	0	1	1	0	1	0
comment on the port's posts-August	1	1	1	1	1	1	1	1	1	1	0
comment on the port's posts-weekly	1	1	1	1	1	1	1	0	0	1	0
comment on the port's posts-daily	1	0	0	0	0	0	0	0	0	1	0
allow users to post on the page	1	1	1	0	1	0	1	0	0	1	1
posts by users-June	1	1	1	0	1	0	1	0	0	1	0
posts by users-July	1	1	1	0	1	0	1	0	0	1	0
posts by users-August	1	1	0	0	1	0	1	0	0	1	0
posts by users-weekly	1	1	0	0	0	0	0	0	0	0	0
posts by users-daily	0	0	0	0	0	0	0	0	0	0	0
"Like" on users' posts-weekly	1	1	0	0	0	0	0	0	0	0	0
"Like" on users' posts-daily	1	0	0	0	0	0	0	0	0	0	0
comment on users' posts-June	1	1	1	0	0	0	0	0	0	0	0
comment on users' posts-July	1	0	0	0	1	0	0	0	0	0	0
comment on users' posts-August	1	1	0	0	0	0	0	0	0	0	0
comment on users' posts-weekly	1	1	0	0	0	0	0	0	0	0	0
comment on users' posts-daily	0	0	0	0	0	0	0	0	0	0	0
Two-communication-total	22	19	14	10	16	9	14	9	8	15	7
Total	24	21	16	11	19	10	15	10	9	18	8
D. Service recovery (1 point)											
1. service recovery	0	1	1	1	0	1	0	1	0	1	1
Total	0	1	1	1	0	1	0	1	0	1	1
Total (35 points)	27	24	20	15	23	14	17	14	11	22	12

In “Information disclosure”, all the eleven ports have posted their news or the service updates on the “Wall”. However, three ports (Port of Long Beach, Port of Tokyo and Port of Rotterdam) have not clearly presented their vision, mission or contact information in “About”. Moreover, Port of Manzanillo has not used Facebook to release the date and any other specific information about the port-related events.

Additional findings: Port of Long Beach added an application called “Join our mailing list” in the “Custom Tabs”. The function of this application is more or less like the news feeds, since it enables the used to subscribe the certain categories of port-related news which they are more interested in. The information disclosure of Port of Long Beach has realized mass customization

to some extent through this application.

In “Relationship marketing”, 29 checkpoints have been divided into 5 categories. In the first category: “Brand or culture”, four ports (Port of Los Angeles, Port of Oakland, Port of Virginia and Port of Rotterdam) were found out that they have posted the content about their ports’ culture story on the “Wall”. For example, Port of Los Angeles has related its culture and history with a famous book called “20,000 Jobs under the Sea”; Port of Oakland began with an old map of the port area to show audience how the port was formed.

In the second category: “Multimedia content”, we confirm that all of the ports have enriched the form of their postings, by video, photos and so on.

However, we only found the use of “Entertainment Apps” on Port of Rotterdam’s page. They developed “Jouw havenfoto”, an image composition application, which enables the users to combine their own photos with the interesting port scenery as background.

The eleven ports performed a little better in “Social campaign” than in “Entertainment Apps”. Two ports, Port of Long Beach and Port of Virginia have conducted the social campaigns based on their Facebook page. The “Social media Harbor Tour” held by Port of Long Beach is an annually social campaign started in Year 2012. It is a free boat tour offering the users of the port’s social media a good ways to learn more about the Port. After the tour, the port kindly asked the visitor to post photos about the tour and to answer the questions about the port on their Facebook “Wall”. This campaign has encouraged the user-generated content on their Facebook pages and also enhanced the interaction between ports and users. Unlike Port of Long Beach, Port of Virginia seems prefer holding social media contest. They not only launched the “1100 follower contest” during May and June, 2013 and “Friday’s Trivia Question” during June and July, 2013, but also used Facebook to promote their “VPA Twitter Contest”. The content of these contests is mainly about sharing the port photos or answering the port-related questions. The prizes are always the VIP tickets of all kinds of port event during summer.

In the last category: “Two-way communication”, all the ports updated their “Wall” postings on a weekly basis, but only Port of Virginia could post on their “Wall” every working day. Every port could receive at least one “Like” on their postings per day expect for the Port of Algeciras Bay, while only Port of Los Angeles and Port of Rotterdam got “Comment” from their users daily. The

users of Port of Algeciras, Klang Port and Port of Tokyo seemed not that actively in leaving comment on the ports' updates, since they are the only three ports which cannot ensure to be commented every week. Seven out of the eleven ports allowed their user to post their own content on the "Wall" (i.e. Port of Los Angeles, Port of Long Beach, Port of Oakland, Port of Virginia, Port of Manzanillo, Port of Rotterdam and Port of Algeciras). Among the seven ports, only in Port of Los Angeles and Port of Long Beach, the "Post by others" could update on a weekly basis. The "Like" and "Comment" of "Post by others" also presented at least once a week only in these two ports. Overall, the conversations initiated by ports still dominated the communication on the seaport Facebook pages.

In "Service recovery", we have observed such behavior on seven ports' Facebook pages. They either answer the users' questions about the ports' operation or port event information very friendly, like Long Beach, Port of Seattle, Port of Houston, Klang port and Port of Rotterdam, or quickly reacted on the port protest or accident by updating the latest situation and replying any questions from the users about the protest. In regard of other ports, like Port of Los Angeles, we found that they just answered a small part of all the users' questions. We do not think these ports performed well in "service recovery", since majority of the users' question remained unsolved.

In the end, we divided the total score of every port's Facebook into four score level (see Table 4-17). According to the scores, it seems that the two ports in Asia have realized least marketing potential of Facebook as their scores are ranked on the bottom. Port of Rotterdam, on the other hand, even though they are one of the two representatives of European ports and just opened their Facebook page last year, the port performed quite well in making marketing use of Facebook as they are rated fourth just behind Port of Los Angeles, Port of Long Beach and Port of Virginia.

Table 4-17 The range of total score

Range of Total score	No. of Ports	Ports (Total score)
More than 25	1	Los Angeles(27)
Between 20 - 25	4	Long Beach(24) Virginia(23) Rotterdam(22) Oakland(20)
Between 15 - 19	2	Manzanillo(17) Seattle(15)
Between 10 - 14	4	Houston(14) Klang(14) Algeciras(12) Tokyo(11)

Other findings of the seaport Facebook page

1) Language. In regard of the languages used in these Facebook page, all the ports seemed stick to use the official language of their location. On the page of Port of Rotterdam, we only found once that when a user commented the posting in English, the port also replied in English. And Klang Port used two languages on their page - the official language of their location: Malaysian and their Lingua franca: English. Beyond that, no usage of multi-language has been observed by us from other ports' page. This phenomenon implies that the use of port social media probably still stays local. The possible language barrier might reduce the effectiveness of social media as a marketing tool. Since the port customers do not restrict somewhere nearby in the ports' hinterlands, a large part of customers are from the port forelands, who have high possibility of preferring different language with that of the certain port. However, the ports in English-speaking countries might have natural advantage, as English is one of the most widely spread languages in the world.

2) Specificity of the seaport Facebook. It is very straightforward to think that the seaport Facebook is specially opened for ports. However, the opinion is not 100 percent true in reality. For example, the Facebook page of Port of Oakland is in charge of both seaport and airport in Oakland; Situation of Port of Seattle is similar as their Facebook page is served for all the port activities at airport, cargo, commercial fishing and marina facilities. In some cases, the Facebook pages do not only serve the port in the conventional sense, but also the waterfront area and even the city where the port located in, like Port of Tokyo.

4.3 Case studies of seaport social media and Facebook page

In last section, we evaluate marketing performance of the eleven seaports' Facebook pages with the scoreboard. The results show a variety among the seaports in the way and the intensity they use their Facebook pages as a marketing communication tool. Since all of the seaports could be considered as "leading" or representative seaports in their own regions or countries, it is very interesting to explore the causes of their differentiated behavior on Facebook. There could be many external factors that have impact on the seaports' use of social media. However, the main factor affecting the seaport Facebook pages performance is more likely something internal, that is to say, to what extends the port management is aware of and understands the marketing potential of social media. Obviously, the most straightforward way to determine this effect is to directly interview with the ports' management. But due to the difficulties of reaching these interviewees, we could only turn to the second best research method. The method is more or less similar with the main way in which market research is conducted on social media platforms – silently watching and listening: we search and read the port publications and information related to their marketing strategies and social media strategies via the ports' official websites. Since a firm or an organization's strategies normally represent their "contingent plans of action" including the "committed choices" made by the management to achieve desired goals (Masanell & Ricart, 2010), the ports' strategies on marketing and social media will be a good reflection of the port management's attitude to social media marketing and also a top-down instruction of the ports' use of social media, such as Facebook pages. In this regard, different seaport marketing strategies will hopefully explain the eleven port's variance in their Facebook-score. Therefore, the first task of the case studies is to find out certain seaport's documents like port strategic plan and any other available information which could reveal the port's marketing and social media strategies.

The second task of our case studies concerns about the practical application of marketing communication used by the eleven seaports, taking Facebook for example. The analysis will be proceed in four facets⁴: frequency, direction, modality and content:

⁴ The introduction of the four facets of communication has been given in Chapter 2.

1) Frequency⁵: During the scoring process, we have already assessed the number of “Wall” postings updated by Facebook owners and users in monthly, weekly and daily basis. Now one step further, in the end of individual case study section, we will consider the eleven seaports as a whole to see whether more postings will attract more “active users” proportionally.

2) Direction: Normally, the communication direction on port Facebook can be divided into “initiated by port” and “initiated by users. The communication can be also broken into one-way or two-way communication based on whether it has received any likes or comments⁶. We combine these two classification methods to categorize the “Wall” postings into four groups: one-way communication initiated by port, one-way communication initiated by users, two-way communication initiated by port and two-way communication initiated by users. For each category, its proportion of total postings will be estimated to show the distribution of certain port Facebook communication in terms of the direction. Putting the eleven ports’ data together, we could explore the possible differences in communication direction among eleven ports’ Facebook pages.

3) Modality: In the previous research, we have observed that variety forms of communication are used by the ports on their “Wall” to enrich the verbal content about a topic. The complement could be pictures, video, links or any combinations of them. According to the study made in the field of college athletics, different formats of online communication may shape the users’ experience in different ways and lead to different level of interaction (Wallace, Wilson & Miloch, 2011). Pictures and video are usually considered to have more positive impact on creating the users’ interaction with the content (Mehdzadeh, 2010). Other researchers (Clavio & Kian, 2010; Hollenbaugh, 2011) also identify that photos are one important reason why users interact in social networking website. On the other hand, using links means encouraging the users to interact with the external content other than the content originated on Facebook. Links, as they bring ‘fresh air’ from the outside, may also diversify the content of “Wall” postings and stimulate the users’ interest in interacting with the Facebook page. However, it still remains unknown that whether variety forms of communication other than purely text can encourage the seaports’ Facebook users to interact onto the page, since the characteristics of the seaports’ Facebook

⁵ We use the same database with that we used for the scoreboard.

⁶ We consider the postings without any “like” or any comments as one-way communication.

users might be different from the Facebook users of other industries. With this doubt, the “Wall” postings of the eleven seaports’ Facebook pages will be categorized and counted according to their communication formats in each case study respectively. And the users’ feedback will be captured and evaluated by the number of “Like” and “Comment” they gave to each post. As we discussed above, “Like” usually shows the users’ admiration for the posting, while “Comment” directly indicate the users’ interaction with the posting. After the individual case studies on the eleven ports have been done, we will integrate all the data together, attempting to describe a general pattern of the communication types for the eleven representative ports. (Non-parametric ANOVA test will be contingently employed to test whether some forms of communication are more popular than others among the seaport Facebook users. We suppose to determine two things here: 1. what form of communication is most often used by the seaport? 2. What form of communication is preferred by the seaport Facebook users?)

4) Content: In general, the communication content on Facebook is under very little restrictions. It can be any types of marketing promotions, such as advertisements, sales promotion, recommendation and also some indirect marketing communications like the port news, information about the port events etc. According to our review on existing literatures, retaining long-term relationship with customers is the major marketing goals of both service firms and B2B firms. It means for ports, the marketing communication is less likely to be something straightforward, but probably something can influence the users’ perception of the port in positive ways. This assumption has already been proved in sport industries. For example, Schultz and Sheffer (2010) found that instead of short-term and direct marketing promotion, most postings on the sport team’s twitter were information-related and aimed at relationship building with their followers. Moreover, Kassing and Sanderson (2010) reported that event-related information would help to attract and encourage the users of social media. In order to know whether this conclusion is also true in seaport industries, the method we used in evaluating the seaport Facebook users’ preference will be applied here too. Similarly, the questions to be answered are: 1. what content of marketing communication is most often used by the port? 2. What content of marketing communication is preferred by the seaport users?

The last question is what image the port attempt to communicate to their Facebook users and how the users like them. For example, on August 22nd, Port of Los Angeles posted one piece of

news that the air quality in the port area continuously improve in the past seven years. This news can be associated with the port's goals of leading the environment protection around the world. What we attempt to do is to see whether there is a kind of port image specially appreciated by the users.

Overall, our main objective is to look for and figure out some types of communication which can effectively encourage the port social media users. And to what extend the Ports have realized their social media users' preference currently. We expect our results could help the ports to further improve their social media marketing communication in right ways.

Port of Los Angeles

The Port of Los Angeles, located in the San Pedro Bay, is the largest American container seaport in terms of cargo throughput (TEUs) and has been considered as a premier gateway for international commerce in Southern California.

Marketing Strategies and Social Media Strategies

1. Marketing Strategies

The marketing strategies of Port of Los Angeles are tightly linked to various port objectives across time. According to the strategic plan for Year 2006 to 2011, the marketing plan mainly served for maximizing the cargo and land uses. The actions included improving the customer services and building relationship with major customers of the ports, such as significant cargo owners, shipping lines and terminal operators. Moreover, the marketing team was also committed to promote the branding process of the port and identifying and communicating the customer-focus messages related to the Business Development Plan. Later on, marketing strategies of the Port had changed with the update of the five-year strategies plan. In the strategic plan for Year 2010 to 2011, marketing activities were still considered as initiatives for port business development. Different types of marketing communications like news stories, materials and advertisements were required to underscore the port's business-friendly focus. Promoting the ports by its hinterland connection and advantaged infrastructure, relationship marketing and recognizing new business opportunities were the key elements of the port marketing strategies.

2. Social media strategies

The social media strategies of the Port of Los Angeles mainly concern about the Port's Facebook and Twitter. The Port's presence on Facebook and Twitter was consider as successful expansion of public outreach channels into the social media arena, meaning the port Facebook and Twitter were supposed to strengthen relations with stakeholders by education, meaningful interaction and engaging events. Additionally, the community in the LA Waterfront was an important stakeholder of Port of Los Angeles according to its community-focus strategies. Furthermore, in the new version strategic plan for Year 2012-2017, the Port still positions social media as an external relation tool. They aim to use social media to enhance coordination of customer and local community outreach and engagement. In this regard, the port also realized the need for

increasing the presence of social media, so they set up short-term goals for its Facebook and Twitter (i.e. get 10,000 Facebook friends and 5000+ Twitter followers respectively before June, 2013.)

The Port's Social Media and Facebook page

1. Social media

The Port of Los Angeles has shown its presence in full range of the four mainstream social media websites used by ports.

Facebook: The Port has revealed abundant and colorful contents on it, including photos and videos of the Port and the Port region on its page. We have observed this Facebook page's crossover with the Port's YouTube channel several times, especially while reviewing the Port's events or introducing the waterfront area of the Port.

Twitter: The Port uses Twitter to share its news and information with the public. The main activity the Port has been done by Twitter is to offer the summary of its news or information with the links pointing to the origins of the information, which including the Port's official website and Facebook page.

YouTube: On the Port's YouTube channel, videos have been classified into seven playlists, namely, Points on the Promenade (i.e. a three-episode series exploring the attraction along Los Angeles), Security, Education, LA Waterfront, Community Events, News Conference and Latitude (i.e. the Port's e-newsletter). Most videos are relevant with the local community.

LinkedIn: The Port's LinkedIn rather orients to internal communication. However, only one update has been found on the page, and it is a meeting reminder for the Port employees.

2. Facebook

The Port Facebook page has been rated four and a half stars on a five-star scale, meaning the users has a very positive sentiment towards this page. Moreover, the page also has the most "Like" among the eleven ports' Facebook pages. The Port behaves as a friend of the users, talking about interesting events, nice pictures and super facilities of the Port. Besides, Port of Los Angeles even communicated its history deftly on Facebook by recommending a book including story of the Port in it. Generally, the communication on the Facebook page has catered to the users' preference, by heavily using the visual contents (i.e. photo or video) mainly related to local community. Accordingly, the users seem be infected by the friendly and happy atmosphere on

the page, as they are also active in creating their own content on the “Wall”.

	Post by port	Post by users
June.2013	13	13
July.2013	20	15
August.2013	15	8
Total	48	36

According to the three-month figures, the frequency of users’ postings was not much less than that of the Port’s. In total, 84 postings were updates during the Summer time of 2013 by the owner and the users of Port of Los Angeles Facebook page. Two-way communication initiated by port (57.14%) dominates the direction of the 84 postings. Two-communication initiated by users also takes a considerable proportion (27.38%). None of the communication initiated by port is categorized as one-way, meaning all the postings updated by the ports have got feedback.

Port of Long Beach

Port of Long Beach is the second largest container seaport in the United State, located at the Los Angeles metropolitan area. The Port is an important gateway for cargo moving between the United State and Asia, whereas 90% of the shipments through the port are related to East Asian trade.

Marketing Strategies and Social Media Strategies

1. Marketing Strategies

The most recent port marketing strategies documents we can find is the Communication Plan 2008-2011, which was created by Communications and Community Relation Division of Port of Long Beach. The port considered this document as both communication plan and marketing plan. The primary goal of the plan is to communicate effectively to a wide audience. The Communication and Community Relation Division also defined its vision as follows: "To project a positive image of the Port of Long Beach within the global maritime industry, international trade market, and the local and regional community...", as the port had realized the impact of positive port image on retaining and attracting business, promoting an understanding of and support for the port general goals and operations. In order to support excellent customer services, quick and meaning respond is needed during the communication with the port stakeholders. In this context, the port specified that their communication should be proactive, positive, open and honest, two-way and also strongly themed. Moreover, the port even revealed four categories of key messages as the "strong themes" of the port communication. The key messages were similar with those we supposed in last section, they are "The port is a vital economic engine for Long Beach and South California region"; "The Port is committed to reduce the negative environment impacts of port operation"; "The Port is an active and important community partner" and "Safety and security are top priorities at the Port". Additionally, the Port had defined six groups of stakeholders as their targeted audience. They are residents, employees, News Media, port tenants, international trade market and businesses. They all together had made up the so-called "port community" in broad sense.

2. Social Media Strategies

The Port has not specified the use of social media in this document or any other port document

which are available for us. But they mentioned the use of website as an easy access to port information for their audience several times in the plan. Since all of Port of Long Beach's social media websites were opened one year before the publication of this Communication plan and their links are under the heading of "Connect to us" in the Port's official website, we believe that social media had been considered as one kind of port communication platforms under the name of "website". So the goals and guiding principles in the Communication plans could be applied to the port social media strategies to large extend.

The Port's Social Media and Facebook page

1. Social media

The Port of Long Beach has shown its presence on the four mainstream social media websites used by the port worldwide.

Facebook: The Port's Facebook page is mainly used to communicate variety of port information, including news, event-related information, job information and schedule reminder. Apart from creating fresh content on its Facebook page, the Port is also keen to share either news or video from its official website, YouTube channel and other outside news media.

Twitter: The content on the Port's Twitter is roughly consistent with that on its Facebook page, even though the type of communication on the Twitter page more tend to be textual summary of the content combined with links to the information origins. Besides, the Port's Twitter also attempts to encourage the users more intensively by periodically interactive question-and-answer campaigns. But the active participants are not too many.

YouTube: There are mainly three categories of videos on the Port YouTube channel: "Pulse of the Port", "Creature Seekers" and "On the Go". Specifically, "Pulse of the Port" is a half-hour video program, offering viewers the stories behind this one of the busiest seaport complexes in the world; "Creature Seekers" is port-made micro-movie, aiming at communicating the image of "green port"; "On the Go" is the video reporting the community news.

LinkedIn: The Port performs very inactive on its LinkedIn page. Even through the page has followed by more than one thousand people, no content updates have been found recently.

2. Facebook

The Port Facebook page has been rated four and a half stars on a five-star scale, meaning the users has a very positive sentiment towards this page. The total "Like" of the page in general

ranks the second among the eleven ports, but the amount is even less than half that of the Port of Los Angeles. Under the instruction of the Port Communication Plan, the Port images reflected by its Facebook page are quite concentrated and strong-themed: The Port is a community partner and has been making effort on creating new jobs for the Port Community. Additionally, the Port behaves rather responsibly on the page and conducts the social media campaign “Social Media Harbor Tour” every year. The campaign is exclusively for the followers of the Port’s Facebook and also Twitter, aiming to offer the local residents better understanding of the Port. In return, the participants also shared this favorable experience with the world on the Port’s Facebook or somewhere else.

	Post by port	Post by users
June.2013	12	24
July.2013	7	4
August.2013	13	7
Total	32	35

A little surprisingly, the number of postings updated by users (35) in the three month is a few more than that updated by the Port (32). It is mainly because the Social Media Harbor Tour held in June, which has largely increase the amount of user-generated content at that time. The direction of communication on this Page is mainly two-way communication by port (43.28%) and one-way communication by users (34.33%). The fact indicates some possible drawbacks of this scheme of communication: the users’ postings were less likely to get any forms of replies, which will reduce the users’ enthusiasm for interacting with the port Facebook page.

Port of Oakland

The Port of Oakland, lying on the eastern shores of San Francisco Bay, is the six largest container seaport in North America by TEU. The port is a transportation hub for the East Bay region. However, the Port Authority of Oakland oversees not only the Oakland seaport, but also Oakland International Airport and 20 miles of waterfront.

Marketing Strategies and Social Media Strategies

Unfortunately, none of the Port strategies dedicated to marketing or social media issues can be found by us. However, in the Strategic plan 2011-2015 which the Port determined in October, 2010, one of the strategic goals is to “promote a proactive and responsive communication model.” The opening of Port of Oakland’s Facebook in January, 2011 may have something to do with this strategic goal. The port also reveals that the fundamental objective of this strategic is to reach “a wide range of both internal and external stakeholders” by using state-of-the-art practices and technology. A large user base on social media websites can provide the Port opportunities to reach audience, so it is not difficult to understand why Port of Oakland has used a combination of Facebook, Twitter, YouTube and LinkedIn. However, the Port had not identified the key messages as main content of communication to their stakeholders. After that, the Port updated the Strategic Plan in June of this year. The update appeared to signal an emphasis on internal communication in the following year.

The Port’s Social Media and Facebook page

1. Social media

The Port of Oakland has shown its presence on the four mainstream social media websites used by the port worldwide.

Facebook: Due to the multiple tasks of the Port Authority, the Port’s Facebook page commits to issue all kinds of information related to not only maritime section but also aviation section and real estate. Apart from sharing the news from the Port Authority’s official website, the Port also help to promote the content from the websites dedicated to the Port Waterfront and Oakland International Airport.

Twitter: The content on Twitter synchronizes that on the Port’s Facebook page, whereas the tweets look less diverse in terms of the communication modality. However, it makes the

communication on Twitter more direct with brief words.

YouTube: Only fourteen pieces of videos have been posted on the Port’s YouTube channel, even though this channel has been opened since the Year 2008. As the Port revealed, the YouTube channel is used to disclose the video about the Port’s information and events. But indeed, the topics of the fourteen videos are diverse, varying from the general introduction of the seaport to the time lapse video of Oakland Airport. A small part of video on this YouTube channel has been promoted on the Port Facebook and Twitter pages.

LinkedIn: Even though there are more than one thousand followers connecting with the LinkedIn page of the Port of Oakland. The Port seems not to make full use of this page, as none of recent updates by the Port can be seen on the LinkedIn page.

2. Facebook

The Port Facebook page has been rated four and a half stars on a five-star scale, meaning the users has a very positive sentiment towards this page. As we mentioned in the Port Strategies, Port of Oakland aimed at promoting a “responsive” communication model. The Port seemed carry on this promises in some ways on its Facebook, as we have observed that on June 5th, 2013, the Port quickly and very kindly replied the requirement of port service information and inquire of shipping issue to a cargo & freight company and a potential shipper respectively. The Port Facebook also realized “Proactive” by real-time updating the situation of the protest in the maritime area all the way between August 20th and August 21st, 2013. In this case, the Port of Oakland has made use of the instantaneity and effectiveness of the social media communication, reducing the negative impact of this protest in time. However, postings on the page tend to be textual and informative. Additionally, we have also observed the Port’s effort made on internal communication, introducing new employees, mourning the departed employee and so on. And this kind of communication has got many responses, indicating the Facebook could be a good platform for internal marketing.

	Post by port	Post by users
June.2013	13	2
July.2013	13	2
August.2013	16	0
Total	42	4

During the three months, forty-two postings were generated by port. Among them, five postings

were dedicated to the International Airport of Oakland, which did little with the seaport section. However, the users seemed not that active in posting their own content. There were only four postings updated by users in this period: two is the Port customers' inquiry, other two is the Facebook users' promotion of their own Facebook or business, which is more or less irrelevant with the Port communication. The vast majority of communication (91.3%) on the Port's Facebook page is two-way communication initiated by the Port. Actually, no Port-initiated communication got zero reply. It means the attractiveness of the Port's postings to the users is on a relatively high level.

Port of Seattle

Port of Seattle is located on the King County, Washington and is a port district including Seattle's seaport and airport. The Port is an important node of international trade, transportation and also a tourism attraction on the Pacific Northwest.

Marketing Strategies and Social Media Strategies

We found no port documents or strategic plans which have strong link with the Port's marketing or social media issues. It seems that most strategies have fell on generating new jobs for the region. However, the Port has provided the job opportunities in the field of container marketing for seaport division. Moreover, open internal communication is promoted by the port in order to foster trust and cooperation between the port and the port employees. Therefore, we judge that the port at least has basic awareness of the positive impact of marketing and communication on the Port operations. Social media may be used by the Port in keeping contact with the public, as the symbols of YouTube, twitter and Facebook have been shown in the most obvious place on the Port official website.

The Port's Social Media and Facebook page

1. Social media

The Port of Seattle has shown its presence in full range of the four mainstream social media websites used by ports.

Facebook: The Port Facebook aims to update information and discussion on Port of Seattle activities, which includes cargo shipping, commercial fishing and also the activities at the Seattle airport. This Facebook page can be considered as a communication outreach of the Port website, as majority of the activities on the Port Facebook page is to share the Port news and information from the Port official website.

Twitter: The content of the tweets is similar with that of the postings on the Port Facebook page. Additionally, the Port also uses Twitter to immediately response to their followers' questions. In this way, the quality of the Port's services could be improved.

YouTube: The Port has updated nearly two hundred videos onto its YouTube channels. The videos record many aspects of the Port events, news and information. But they have not been well classified and we have not observed any coverage of these video by the Port Facebook or Twitter.

LinkedIn: The Port’s LinkedIn page is mainly used to disclosure their recruitment information, as all of the updates are informing the job opportunities at Port of Seattle. To some extends, the Port has make use of the professional social networks providing by LinkedIn.

2. Facebook

Word-of-mouth communication seems to be largely restricted on this Facebook page: the five-star rating has not shown on the Port’s Facebook page, the postings initiated by the users are not allowed and the Facebook managers set up posting guidelines to all users. The comments that do not follow the guidelines will be removed. Indeed, posting guidelines can be good way to standard the management on the Port’s Facebook page. However, it should not be too restricted to forbid the postings initiated by the users. The users’ postings and opinion could be good sources of positive word-of-mouth communication if the Port gives the properly guidance to the user-generated content instead of totally forbidding them.

Particularly, among the postings mainly made up of informative content, we saw one piece of encourage message. This message can almost be seen as an advertisement-like posting, since the Port shows the port photo in foggy day, adding the words “Even a little fog in the harbor won't stop maritime commerce. Bring your cargo. Seattle is ready”. Judging their feedback, the users do not have anything against this advertisement-like message. The fact tells us that, if the Port grasps the right timing properly to promote its advantages, like the foggy weather to promote its advantages, it might lead to something really great.

	Post by port	Post by users
June.2013	13	0
July.2013	14	0
August.2013	14	0
Total	41	0

In general, there is no posting initiated by the users since it is not allowed. The number of postings initiated by port is almost the same in every month. In total, forty-one postings were generated by the ports within the pasting summer. Among them, majority of communication (82.93%) had got replies, either by “Like” or by “comments”. And the percentage of the two-way communication roughly kept constant in every month.

Port of Virginia

Port of Virginia is a state-owned located on the east coast of the United States. Usually, the Port of Virginia refers to the Virginia Port Authority (VPA) which manages a group of port terminals, facilities and maritime activities centered on the Port of Hampton Roads, Virginia.

Marketing Strategies and Social Media Strategies

Apart from the annual report, many port documents are unavailable for us. In the accessible port strategic documents, little evidence can be found to be related to marketing or social media. However, we notice that among the eleven members of VPA Board of Commissioners, one commissioner is specially in charge of government relations, communications, marketing activities of the Port. It shows the Port at least has the primary understanding of the importance of marketing and communication. VPA also reports in their annual report of Fiscal Year 2013 that a long-term restructuring plan is approved to improve communications and to build a customer-focus port. In the summary of Fiscal Year 2013, the Port determines their focus on marketing as well. While the port employees in other department have been decreasing in the past three years, the marketing and economic development personnel even increase a little. All the appearance indicates no less importance is attached to marketing by the Port. But, unfortunately, we are unable to find any specific marketing strategies – not to mention any social media strategies.

The Port's Social Media and Facebook page

1. Social media

The Port of Virginia has opened its Facebook page, Twitter, LinkedIn and YouTube channels. And the Port seems attempt to highlight its two slogans: “port proud” and “booms down jobs up” on the four social media platforms.

Facebook: The Port uses Facebook to broadcast the Port's news information and announcement, and also those of their business partners and big customers. To increase the awareness of the users, the Port Facebook also helps to promote the videos on its YouTube channel. Periodically social media campaigns are held by the Port on the Facebook page to engage the users' interaction.

Twitter: The content of tweets is similar with the postings on the Port Facebook page. However,

the ways the Port communicates on Twitter tend to be briefer but also with higher frequency. Social media campaigns, like VPA Twitter contest, were also held on the Port’s Twitter every now and then.

YouTube: There are more than fifty pieces of videos updated on the Port YouTube channel. And they can be classified into four categories: “Out Our Window” series (i.e. a sets of video featuring watercraft, wildlife and interesting happenings on the Port’s waterways), “Timelapsing The Elizabeth” (i.e. a series of video clips of the Port shot by an intern when they sailed down the Elizabeth River), the video of public hearing and government conference, and other fragmented news and messages. As results, parts of the videos offer better understanding of the Port area, while providing pleasure to the views. And the others are more or less serious, reflecting the transparency of the Port management and operation.

LinkedIn: Apart from disclosing its hiring information, the Port’s LinkedIn page also selected some content from its blog and Facebook page to share. The selected content normally would come down to the two slogans: “port proud” and “booms down jobs up”.

2. Facebook

The Port Facebook page has been rated four stars on a five-star scale, meaning the users has a quite positive sentiment towards this page. Even though the Port has conducted social media campaigns to increase the engagement of their users, the postings are a little dull in terms of modality of communication. The news written in flat words seems not that eye-catching. On the other hand, more intuitive content – port photo and more interactive content – internal/media communication are more likely to get feedback from the users. The focus of the two slogans has been highlighted sufficiently on the Facebook.

	Post by port	Post by users
June.2013	22	1
July.2013	23	2
August.2013	35	2
Total	80	5

In terms of the amount of postings, the manager of this Facebook page seems to be the most tireless posters among the eleven ports. In the three months, the Port at least sent one posting every working day. Totally, eighty postings were generated in this summer. In contrast, the postings updated by the users is very few, the users just posted their content five times across

the time scale. In this regard, there is no doubt that majority of the communication on the page (77.65%) can be characterized as two-way communication initiated by the Port, also meaning only very small proportion of the Port's postings (16.47%) has not got any feedback. All of the user-generated content has been replied, though two-way communication initiated by the users only counts for 5.88% of the total communication. We have observed that the user posters include a local transportation company and a shipper, meaning the business entity also started to interact with the Port on Facebook. This fact has reconfirmed that the B2B communication can be realized well on social media platforms.

Port of Houston

The Port of Houston is located on the Texas' Gulf of Mexico with variety of public and private facilities in a 25-mile-long coastline. It is the main port of the State of Texas and also the second largest center of oil and petrochemical industries in the world.

Marketing Strategies and Social Media Strategies

Even though we have not found any well-formulated marketing strategies of Port of Houston, a specialized port department called the Trade Development & Marketing Division has been observed by us. The mission of this division is to "handle marketing and business-to-business advertising for the port." The hard work of this division lead the Port to won different communication awards every year. However, the division is likely to concentrate their effort on the field of commercial advertisement. Besides, press releases, publications and fact sheet are the main communication channels used by the Port. Through the latest version of the Port strategic plan, currently, the Port marketing activities would particularly focus on the real estate section. Unfortunately, no mention of social media strategies can be found by us. But in the Port recruitment information, with a little surprise, we find that the position of HR Generalist has some duties related to the Port social media. It seems that the Port is using social media to source the candidates and to attract top talent. Establishing and maintaining social media and outreach is also responsibilities to Port of Houston's HR Generalist. Therefore, we figure out that the Port social media might be recruitment-oriented to some extents.

The Port's Social Media and Facebook page

1. Social media

The Port of Houston has spread its communication with the public onto all the four mainstream social media websites. We are not sure whether it is because the Port social media is looked after by the Port's Human Resource Department: the Port's profile photos of Facebook and Twitter show the words "1 M JOBS" on them.

Facebook: On its Facebook page, the Port mainly posts some informative content, such as the Port news, schedule reminders or announcement and service information. In this regard, Facebook has been only as an information disclosure platform. However, a little effort was made by variety kind of greetings, to build and maintain good relationship with the public in more

apparent ways. Some videos on the Port's YouTube channel also were reposted onto this Facebook page.

Twitter: Many tweets are simply sharing the links and informing the updating content on the Port's Facebook page. Besides, the Port's Twitter also frequently tweets and retweets some real-time news about what is going on at the Port. And the Port's posting frequency on Twitter is much higher than that on Facebook page. It seems like Port of Houston's Twitter is used to increase the awareness of the content on this Port's Facebook and complement the Facebook communication.

YouTube: The Port does not perform very actively on its YouTube channels. Only then pieces of videos have been uploaded there, whereas the latest one is updated ten months ago. The videos include the introduction of the Port Authority and its vision and strategies, and "PHA Trucking Safety Video" in both Spanish and English. The rest are broadcasting the Port news and scenery. Seemingly, the Port YouTube channel had been intensively used only for a while after it was opened and now it is almost left forgotten by the Port.

LinkedIn: The LinkedIn page has been considered as a recruitment and internal communication platform of the Port. It is not surprising for us, as the Port social media is managed by the Human Resource staff of the Port. There are several updates on the page. Most of them are hiring information, whereas one of them is festive greeting to the employees of the Port Authority.

2. Facebook

The Port Facebook page has been rated four stars on a five-star scale, meaning the users has a quite positive sentiment towards this page. However, it is a pity that Port of Houston does not allow their Facebook page users to update their own postings freely on the "Wall", meaning the Port has not fully used the marketing power of word-of-mouth. Moreover, in our view, the proportion of verbal and informative content is too large throughout the Facebook page, which may reduce the users' passion on interacting with this Page. It may be better for the Port to cooperate with its existing YouTube channels, posting more interesting video related to the Port to attract users.

	Post by port	Post by users
June.2013	11	0
July.2013	7	0
August.2013	6	0
Total	24	0

Since this Facebook page does not allow the users to update postings autonomously, all the twenty-four postings are generated by the Port during the months. This posting frequency is relatively low within the eleven ports. But fortunately, 95.83% of the postings can be categorized as two-way communication initiated by the Port, meaning the vast majority of the postings have been replied by “Like” and/or “Comment”.

Port of Manzanillo

The Port of Manzanillo (Puerto de Manzanillo) is located on the southern shores of Manzanillo Bay in the State of Colima, Mexico. It is one of the busiest seaports in Mexico, connecting the northern, western and central part of Mexico with the Pacific.

Marketing Strategies and Social Media Strategies

Even though the Port of Manzanillo has a specialized marketing department and we have seen several pieces of the news which affirmed the effort made by the Port's marketing team, no systematic marketing or social media strategies of the Port is available for us. However, from the Port objectives revealed in the Port documents, we get to know the Port has been attempting to establish the permanent communication and customized interaction with its clients. There is no doubt that having a page in Facebook and Twitter is good ways to achieve this goal. As the social media platform is also a nice place for the Port to listen to their clients. However, no strategic documents can tell us what the Port plan to do with the social media.

The Port's Social Media and Facebook page

1. Social media

The Port has already started using Facebook and Twitter as communication tools.

Facebook: The Port mainly uses Facebook to communicate the Port's news, photos and event information with the users. In addition, the Port also maintains good internal communication with its employees on Facebook, celebrating the employees' birthday and graduation.

Twitter: The situation of this Port Twitter is a little complicated. When conducting the research in the previous chapters, we attempted to access to the Port Twitter through the link providing on the Port official website and we were led to a Twitter page start in Year 2011 having only three tweets. This Twitter page defined itself as "the Port Community" in the very first tweets. Later on, the Port updated two tweets to announce the issues about the Port Custom and then this Twitter page became silent till now. However, currently, when we click the Twitter's link on the Port's official website, we are unexpectedly led to a brand-new Twitter page which just started in September, 2013. We cannot determine the exact date when the Port did this change quietly, but at least, the Port has become more active on this new Twitter page with thirty-six tweets now. So far, the content of the existing tweets is consistent with that on the Port Facebook.

2. Facebook

The Port has not shown its five-star rating on its Facebook page. The modality of communication on the page is very fixed: textual content plus photos. However, the postings have reflected many images of the Port, such as friendly atmosphere in workforce, sustainable operation and well-trained workforce.

	Post by port	Post by users
June.2013	6	1
July.2013	6	1
August.2013	2	3
Total	14	5

In fact, according to the three-month data, neither Port of Manzanillo nor its Facebook page users are frequent posters, speaking of quantity. During this summer time, the Port and the users only updated their own generated content fourteen times and five times, respectively. The mainstream communication direction on the “Wall” is the two-way communication initiated by the Port (73.68%). All of the Port-generated content has got some feedback from the users. However, most user-generated content has not got any “Like” or comments. In our view, the Port should be responsible for either praise or complaint of their users. It would encourage the positive word-of-mouth and also reduce the harmfulness of the negative word-of-mouth.

Port Klang

Port Klang is the largest port in Malaysia, locating on the western coast of Peninsular Malaysia.

The Port is aiming at being the National Load Center and finally the regional hub.

Marketing strategies and social media strategies

Unfortunately, most strategic documents of Port Klang, including the Port Klang Development Master Plan, have not been totally public by the Port Authority. For the latest Master Plan, only some highlights are available for us. And there is no mention of marketing or social media strategies in the accessible content. However, the Port revealed that their Corporate Communication Department initiated and coordinated the limited-edition Port Klang Coffee Table Book in September, 2011. The aim was to highlight Port Klang's competitive advantage in terms of its vital location, advanced facilities and customer-oriented terminal operators. Additionally, what attracts our attention is the new chairman of Port Klang Authority Dato' Dr Teh Kim Poo, who took power in 2011. According to his resume, we can see Dato's Dr Teh has good education background in marketing and is even a Chartered Marketer. He also defined himself as a marketing person. In response of the marketing issues of the Port, he pointed out that the two important things were: 1. Maintain healthy competition between the two private terminal operators in the Port; 2. Ensuring the real estate around the port area and township develop simultaneously with Port Klang. The first point aimed at achieving higher efficiency, while the second point was for promoting tourism and improving the surrounding residents' quality of life. It seemed that the new chairman was willing to build good relationship with the port community. Whatever, within his first fourteen months in office, the Port Klang's Facebook page had been opened. Even if the use of social media has little correlation with Dato's Dr Teh, we still believe that the Port at least has set up some marketing strategies, somewhere in the hidden parts of its strategic documents.

The Port's Social Media and Facebook page

1. Social media

As the Port revealed on its official website, the Port should have opened both Facebook and Twitter. But its Twitter can never be accessed since we started our research through the link on the Port website. Moreover, we cannot find any Twitter pages of the Port Klang by directly

searching the names of the Port on Twitter. Therefore, we think Facebook is the only social media website used by the Port.

2. Facebook

The Port Facebook page has not shown the five-star rating. In general, the Port Klang has not realized the marketing potential of Facebook. The Port only treats this social networking website as a free information disclosure platform. They just post the information they want to show their users, without essential highlights or further explanation. Their users are very hard to be attracted and interact with this kind of 'straightforward' information. Lack of summary of the information also made it hard to build any strong and clear image of the Port in the users' mind. So we suggest Port Klang try to be more 'talkative' on its Facebook page, while always highlighting the key points of the information posted onto the "Wall".

	Post by port	Post by users
June.2013	8	0
July.2013	16	0
August.2013	4	0
Total	28	0

Moreover, the postings initiated by the users are forbidden on this page. This fact will further singularize the types of users' participation with Port Klang's Facebook page. The updating frequency of the Port per month is not stable. In total, twenty-eight postings were generated during the three months. Thankfully, majority of the postings (92.86%) have got feedback from the users.

Port of Tokyo

Port of Tokyo is located at the head of Tokyo Bay between the estuaries of the Arakawa and Tamagawa Rivers. It is one of the largest Japanese seaports and an important transport hub for Japanese domestic cargo. The Port Authority of Tokyo acts as a manager and a maintainer of the Port. It is also a main developer of Tokyo Waterfront Sub-center and port region parks.

Marketing Strategies and Social Media Strategies

The strategies of the Port of Tokyo are only partially open to public through the document called “Future Plans of the Port of Tokyo”. Since Japan is an earthquake-prone country, a strong strategic emphasis is made on the Port safety and crisis response. By this document, we have also determined one mission of the Port Authority is to develop the waterfront area into a site for interchange, relaxation and transportation. Setting this objective may lead the Port to frequently communicate with the Port Community living in the waterfront area to maintain good and close relation. But we have not found any marketing, communication or social media strategies in the plan.

However, in practice, the Port Authority has set up the “Port of Tokyo Promotion Council”, an organization dedicated to increase the Port awareness by various promotion activities, such as port advertising campaign, port visits and so on. Together with the port authority and the metropolitan government, the port promotion association has opened ‘Tokyo Port Museum’, aiming to offer visitors a better understanding of the Port of Tokyo. Apart from the Port history, the messages this museum would like to delivery include different aspects of the Port (e.g. a satellite view, aerial view and port documentary), the strong impact of the Port on international trade and the urban development of the Port.

After all, no specific social media related strategies are available for us. But we think the social media platform can be a perfect place to promote interchange in the Bay area and also an efficient crisis information disclosure channel. Besides, as an international trade hub port, its image as an excellent urban developer may also be communicated via the Port social media.

The Port’s Social Media and Facebook page

1. Social media

The Port of Tokyo has set foot in both Facebook and Twitter. And the Port started to use these

two social media websites at nearly the same time.

Facebook: The Tokyo Port Authority has revealed on its Facebook page that they will send press releases, event-related information of the Port of Tokyo and also the information about the Waterfront City and disaster prevention in the Port area. And in fact they do.

Twitter: The Twitter page is considered as alternative contact information platform of the Port. Indeed, Port of Tokyo’s Twitter deserves its mission of being an alternative communication channel of the Port’s Facebook, as tweets on the Port’s Twitter are very consistent with the postings on its Facebook “Wall”. In some tweets, the Port even attempt to communicate their followers with more complete messages by providing with the links of the corresponding content on its Facebook page.

2. Facebook

The five-star rating has not shown on the Facebook page of the Port of Tokyo. In terms of the posted content, the Port of Tokyo Facebook page is more like a page for the waterfront area rather than for the Port in narrow sense. The port might think that majority of their Facebook page users are the residents in the port area instead of their business partners, so the postings are fairly community-oriented. Additionally, the postings usually get many “Likes” but very few comments. It indicates that there are lots of the users paying their attention to and supporting this page, but the postings is less arguable so the users rarely leave their comments. This shortage would prevent the Port to make full use of the interactive social media platform to further market itself. Moreover, even though the Port aims to enhance the interaction within the waterfront area, it still does not allow the postings initiated by the users appearing on the “Wall”. This restriction might play down this Facebook page’s opportunities of using positive word-of-mouth communication.

	Post by port	Post by users
June.2013	7	0
July.2013	8	0
August.2013	8	0
Total	23	0

In regard of the three-month data, the frequency of the postings is not high but very constant. The Port would update about eight times per month on the page. And all the Port’s postings have received the feedback from the users.

Port of Rotterdam

Port of Rotterdam, always known as the gateway of Europe, is one of the largest container ports, logistics and industrial hubs of Europe. One of the world largest petrochemical clusters is located on the port area.

Marketing Strategies and Social Media Strategies

In the Annual Report of 2012, the Port revealed that they would apply some marketing concepts into their commercial strategy. And these marketing concepts mainly targeted the market sectors in which Port of Rotterdam would like to increase or further increase the market share. Moreover, the Port also made effort on marketing the port as a whole. They called this process “port branding”. Several regional representatives in the Port’s foreland were set up to enhance the communication with overseas markets. Moreover, an organization - Rotterdam Port Promotion Council, is specifically in charge of the communication within the Port business community and the surrounding area. Overall, the aim of the Port Authority’s communication strategy is to “increase the name recognition and improve the image of Port Authority, Port of Rotterdam and the industrial complex.” Moreover, The Port of Rotterdam is the only port which reveals the images they want to communicate to the public directly on its website. The images are brief but clear: “The most efficient, safe and sustainable port in the world.” A special business team called “Team Marketing Communication” is responsible for building and changing the world’s perspective on Port of Rotterdam to align with their desired images. Even a dedicated website has been built to “change your perspective” on the Port by means of broadcasting the brand story, highlighting the possible good results of a change of perspective and opinions from the “Port Ambassadors”.

However, no specific social media strategies have been found by us. But we notice the Port posted a piece of port announcement on August 31st, 2010, which informed that they had revamped the Port’s official website, so the users could switch directly to the Port Authority’s ‘social media’. From this action, we can see the attention paid by the Port on social media as a communication tool.

The Port’s Social Media and Facebook page

1. Social media

The Port of Rotterdam has ventured into all the four major social media websites: Facebook, Twitter, YouTube and LinkedIn.

Facebook: On the Port of Rotterdam's Facebook page, a large part of their "Wall" postings commit to introduce the vessels and operations on the Port through text and photo, which could enhance the interaction with their users most effectively. The rest postings are mainly related to the Port events. Relatively few postings are sharing the Port news.

Twitter: Through the links presenting on the Port's homepage, we access to a Twitter page written in English. The Port uses this page to reveal its English news and also its insights, columns and showcases at the "change your perspective" website. With the help of English, this Twitter account becomes more international-oriented than other social media of the Port.

YouTube: There are huge amount of videos on the Port's YouTube channel. Majority of them are in Dutch. But some videos are in English, or have English subtitles. These videos aim to introduce every aspect of the Port visually. Fixed series on the channel include "Wereldhaven Stad Rotterdam" (i.e. a series of propagandas co-produced by the Port Authority and the municipal government of Rotterdam), "Port Compass" (i.e. introductory video of the Port), "Rotterdam Port Tube" (i.e. the Port news). However, we found this YouTube channel is jointly promoted by a Twitter account other than the one showing on the Port's official website. The content of this Dutch-written Twitter synchronize with the video updated on the Port's YouTube channel. And both of them exist for the same goal: "Actief voor heel de haven".

LinkedIn: The Port of Rotterdam uses the ever-expanding professional network of LinkedIn to find the talent they need. Some pieces of port news have been posted on the Port's LinkedIn as well, showing a promisingly better future of the Ports to the (potential) employees.

2. Facebook

The Port Facebook page has been rated four stars on a five-star scale, meaning the users has a quite positive sentiment towards this page. Comparing with those of the Port of Long Beach or Port of Los Angeles, the Facebook page of Port of Rotterdam is no doubt a rising star: it just spent the first birthday but has already done well in communicating with the users.

Throughout this page, what leaves us with the impression is that the managers of the page really act as a friend of their users, using funny words, sharing interesting information and kindly asking the users' opinions about the Port. On the other hand, there seem be lots of 'port lovers' or

'vessel lovers' among the users of Port of Rotterdam's Facebook page, who showed great interest with the news or little knowledge about their port. Moreover, the wording the Port used on the "Wall" is like "chatting" with the users rather than only "telling" them some information. It may also lead the active feedback on the communication from their users. As such, very good interaction has been made between the Port of Rotterdam and their Facebook users.

	Post by port	Post by users
June.2013	14	1
July.2013	14	2
August.2013	24	2
Total	52	5

The number of postings by port is constant expect for August, when the Port of Rotterdam started to promote their annual event: the World Port Day on Facebook. However, the postings by users are very limited, which is one of the few downside of the communication on the "Wall". Sharing the photos of the Port and the vessels on the Port is the main motivation for the users to initiate their postings on the "Wall". We also observed one user posted his positive experience with the Port. Most postings initiated by users have got replies. But it is a pity that two users' postings, both about the positive images about the Port, have not got any "Likes" or comments. Since positive word-of-mouth is a very efficient way for brand-building, we think it might be better for Port of Rotterdam to express its gratitude to these users by "Like" at least, in order to encourage this beneficial word-of-mouth. In general, the two-way communication initiated by the Port dominates the communication on this page.

Port of Algeciras Bay

The Port of Algeciras Bay is the largest port for commercial cargo, fishing and passenger in Spain and the leading port in the Mediterranean containerized transport.

Marketing Strategies and Social Media Strategies

The Port of Algeciras Bay has not revealed their marketing, communication or social media strategies in any public strategic documents. In reality, collaborating with the Port Authority, the COMPORT Promotion Association was initiated to deal with the promotion and marketing issues related to the Port activities. In addition to promote the Port's infrastructures and services, the promotion association also commits to offer a positive image of the Port at different commercial fora.

In terms of port communication, a port employee was assigned to maintain the Port blog- Puerto Bahia de Algeciras Blog. The mission of the blog is to "address issues related to port facilities and global environment." The blog also expands its reach into other social media platform, such as Facebook, Twitter and YouTube. According to the existing information, we consider the blog as a trial on communicating the positive image to the public.

The Port's Social Media and Facebook page

1. Social media

As we mentioned above, the Port has opened its accounts in Facebook, Twitter and YouTube, under the name of "Puerto Bahia de Algeciras Blog".

Facebook: Managed by the same person with the one of the Port's blog, the "Wall" postings were written in similar forms with blogging more or less. It means the postings more focus on information disclosure rather than some interactive content. However, even though it is mission of the Port's blog, issues related to port facilities and global environment have not been highlighted enough. The Port has shown the links of other social media in the obvious place of its Facebook page.

Twitter: Apart from further broadcasting the content of its Facebook, the Port also utilized the easy-repost feature of Twitter, sharing news from its business partners, like Maersk Line and Damco International. It makes the content on Twitter richer than that on Facebook. However, the communication on Twitter is still dominated by straightforward new release. Jointly use of the

Port’s YouTube channel has been observed on it.

YouTube: This YouTube channel has been opened for more than five years, but only twelve videos have been uploaded during these years. Among them, eleven pieces of videos were there five years ago, whereas the rest one was updated one year ago. It means the YouTube channel had lain unused for quite a while and still has not been intensively used at present. The twelve videos are mainly introducing facilities and operation at the Port. In this regard, the Port YouTube channel can be considered as a complement of the communication on other social media of the Port.

2. Facebook

The Facebook page has not shown its five-star rating judging by their users. This page seems largely unknown by public in terms of the number of “Like” it has got in total. The low popularity may be because the Port does not shown the presence of this Facebook page on its official website.

In general, the Facebook page of Port of Algeciras Bay can be considered as a communication outreach of the Puerto Bahia de Algeciras Blog. But in regard of the users’ reaction, interactive content is a little more popular than information disclosure. To improve the communication, the Port could both increase the number of the interactive postings and increase the interactive ‘element’ during the process of information process. It means, for example, when the Port posting a piece of port news, they can ask the opinion of the users about the news in the end, in which way to increase the users’ engagement. Moreover, another problem of this Facebook page is the low frequency of posting by both the Port and the users.

	Post by port	Post by users
June.2013	21	0
July.2013	3	0
August.2013	5	0
Total	29	0

Even though the Port of Algeciras Bay allows their Facebook page users to post their own generated content on the “Wall” freely, no postings initiated by the users during this summer have been observed by us. Moreover, the Port Facebook page was very inactive in July and August: only three and five postings were updated during these two months, respectively. Limited times of updates might reduce the users’ attention on this port Facebook page. The

percentage of one-way communication initiated by the Port is not that different from that of two-way communication initiated by the Port. It means a little less than half of the postings on this Page have not got any “Like” or “Comment”, which results in the poor performance on two-way communication.

After all, we have explored the relation between the frequency of postings and the popularity of the page. The results show there is no significant relation between them, meaning the posting frequency would rarely influence the users’ attitude on certain Facebook page.

total_postings	Correlation	Singnificance	Number of cases
ave.#Like per posting	-0.0081	0.9812	11
ave.#comment per posting	0.1458	0.6688	11
total #user	0.1941	0.5674	11

According to the findings from available port documents and information on the ports’ social media website, all of the eleven ports at least have mentioned some marketing or communication strategies in their strategic plan or other port publications. And every port authority has a dedicated marketing or communication division (e.g. Port of Long Beach: Communication and Community Relation Division) or an outside marketing organization (e.g. Port of Algeciras Bay: COMPORT Promotion Association). However, only Port of Los Angeles has revealed their social media strategies clearly in their strategic plan, whereas other ports seem very cagey about how they will use social media as a marketing communication tool. In addition, according to the available information, the employees who are responsible for their ports’ social media seem differ within the eleven ports. While the Corporate Communication Strategy division is in full charge of the Port of Rotterdam’s social media websites, the Port of Houston’s social media is likely managed by their HR employees.

Six ports have revealed their objectives of certain social media websites. Seemingly, the main objective is providing news and information about the port and the waterfront (e.g. Port of Oakland’s YouTube channel, Port of Tokyo’s and Port of Algeciras Bay’s Facebook and Twitter and

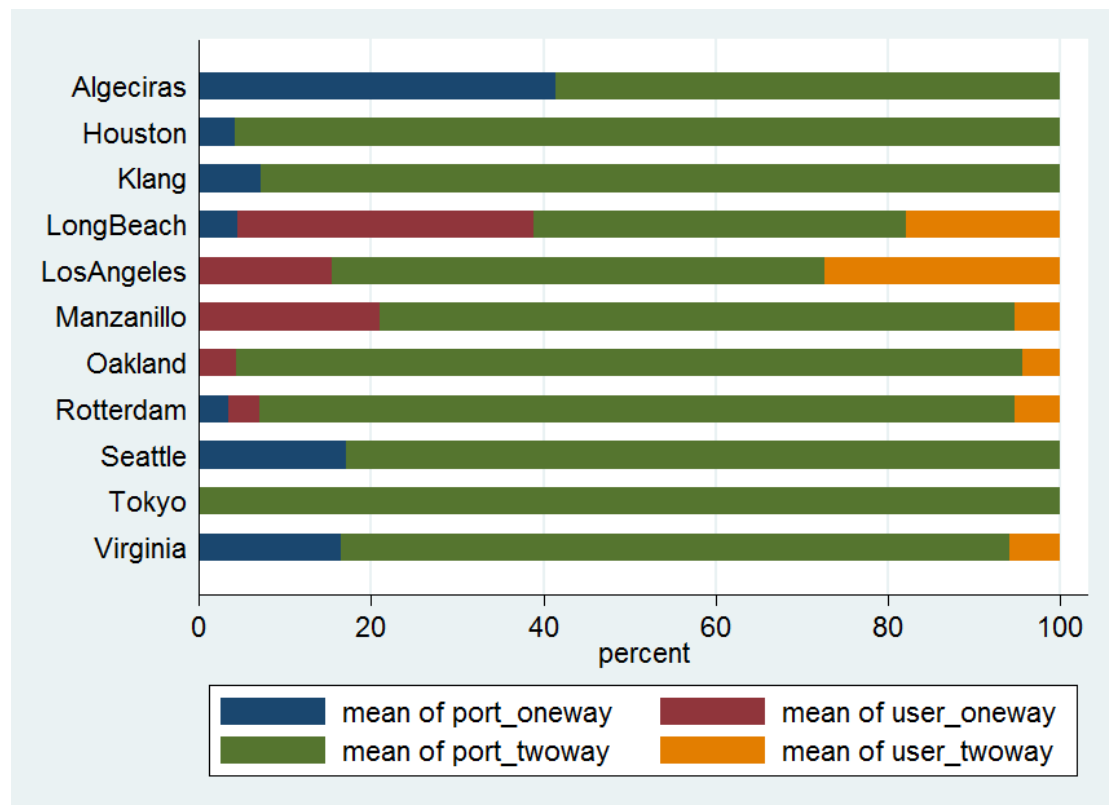
Port of Rotterdam's twitter). Particularly, Port of Rotterdam posts their tweets in English instead of Dutch. The use of English could help the Port to reach a broader audience who are not restricted in the Netherlands. It is a good thing, as the Port (potential) customers also include the ones who are located on the Port's forelands and hardly understand Dutch. Besides, the Port of Seattle is the only port which has mentioned discussion as an objective of its Facebook. As we known, the marketing potential of social media is mainly due to two-way communication and user-generated content. Discussion would be main sources of these two kinds of communication. Overall, the ports' usage of Twitter is similar with that of Facebook. In this sense, the ports' Twitter can be seen as a simplified version of their Facebook pages. Meanwhile, some ports make more use of Twitter to update real-time information. These seaports behave differently on their YouTube channel in terms of updating frequency and richness of video they post. The categories of posted video could be port-made series, news, propagandas or introductory video related to port and port area, showing image in different aspects of ports. Relatively, the communication on these ports' LinkedIn is more fixed, as majority of updates there are recruitment information.

4.4 Further analysis on marketing communication of the seaports' Facebook pages

In last section, we have got an overview of the eleven ports' social media in both strategic and practical level. The frequency of communication on each port's Facebook has also been discussed. In this section, we will further analyze the rest three facets of marketing communication: direction, modality and content on the seaports' Facebook page, considering the eleven ports as a whole. In addition, the images the ports attempt to express via Facebook pages will be concerned. Since improving their images and influencing their perceptiveness in customers' mind are main purposes of seaport marketing communication (Bernard, 1995; Somers & de Wilde 1997; Frankel, 1987; Stuchtey 1991b), it will be interesting to see how the ports achieved these goals through Facebook and to what level.

1. Direction:

Table 4-18 The percentages of different communication directions for each port



In general, majority of communication is initiated by ports. Since they are the founders and managers of their Facebook pages, it is reasonable for the ports to have high incentive to actively shape the discussion on the "Wall". On four ports' Facebook pages (i.e. Port of Los Angeles, Port of Manzanillo, Port of Oakland and Port of Tokyo), all of the port-generated content has received

“Like” or comments from their users. The rest ports’ postings more or less have got no feedback in some cases, whereas on Port of Algeciras Bay’s page, the percentage of one-way communication initiated by port has even accounted for more than 40 percent of total communication. It indicates the ability of port-generated content differs much across ports, in terms of attracting user goodwill and encouraging discussion.

In the literature review chapters, we have already discussed the importance and effectiveness of word-of-mouth communication to service marketing and further seaport marketing. Apart from being generated within the comments on the ports’ postings, a large amount of word-of-mouth communication could appear along with the user-initiated content. In this regard, Port of Los Angeles and Port of Long Beach seem have higher potential in making use of word-of-mouth, as user-generated postings on their Facebook pages made up of half or even more than half of the total communication. However, neither of the two ports is likely to take full advantages of it. As we have seen, a large proportion of postings updated by users have got no replies. The similar phenomenon has also been observed on the Facebook pages of Port of Manzanillo, Port of Oakland and Port of Rotterdam. The implication could be twofold: 1) certain ports have not valued the user-generated content enough. For example, as we have already mentioned in last section, Port of Rotterdam just simply ignore their users’ postings about positive experience with the Port; 2) users themselves are not keen on interacting with other users’ postings. However, the real problem with inactive users is not users but still the ports. While the ports are reported that they have few means to encourage this cost-efficient communication, most of them are just ignoring social media as ready and perfect platforms for promoting word-of-mouth. On the other hand, we do not think the larger proportion of user-generated content on, for instance, the Facebook page of Port of Long Beach only happens by chance. The Port must have consciously attempted to encourage the user-generated content in some ways, such as the “Social media harbor tour”. However, the low response rate at present should be further improved somehow by ports.

It is even worse that some ports (e.g. Port of Seattle, Port of Houston, Klang Port and Port of Tokyo) do not allow users to post their own content onto the “Wall”. We do understand that some of them are trying to avoid the possible risk brought by this free-style communication. For example, Port of Seattle is likely to prevent the content which is not family-friendly at large

through totally forbidding users' posting. But the opportunities brought to the ports by word-of-mouth would always be much more than threats. Moreover, Facebook even enable the owners of certain Facebook page to remove the inappropriate postings silently. In this regard, we cannot come up with any other excuses for these ports which have shut down the function of "post by other" on their pages, since every sign indicates social media platforms like Facebook is really a nice place for ports to encourage and shape word-of-mouth communication.

Apart from word-of-mouth communication, the tolerance of user-generated content seems have positive impact on the overall popularity of certain Facebook page. Below, we make a simply comparison between the ports which allow users to send their own content onto the "Wall" and those do not allow this action, in terms of the average number of "Like" and comments of the ports' postings and the total amount of users.

Table 4-19 The differences in popularity between the ports allow "post by others" or not

	Allow "post by others" or Not	
	Yes(N=7)	No(N=4)
	Mean	Mean
#Like per posting	17.003	12.897
#comment per posting	1.215	0.560
#user per page	20333.143	715.857

The popularity of the ports which free user-generated content seems considerably higher than those do not allow in all measures. The users are more likely to retain on and interact with the "real" social media websites which provide them a free and open communication channel. However, since our sample size is too small, it is a pity that we cannot confirm this conclusion more seriously via statistics test. And reverse reasoning may exist here as well, that is to say, to allow user-generated content is just one indicator of the Port's more awareness of social media marketing potential. So it is not so surprising that these ports are doing better in other aspects of social media marketing.

2. Modality

Table 4-20 The summary of communication modality on the eleven ports' Facebook

Modality of Communication	Obs.	Percentage(N=413)
1.Link	118	28.57%
2.Video	29	7.02%
3.Link+Picture	49	11.86%
4.Picture	160	38.74%
5.Only text	57	13.80%

In the previous scoring process, we confirm that all the ports have included some pictures and/or videos to complement their communication on the "Wall". The above table lists the components of different communication modality in details. The most often used communication modality is textual content with pictures (38.74%), followed by postings with links only (28.57%). However, the rest three formats of communication: pure text (13.8%), textual content with the combination of link and picture (11.86%) and postings enriched by video (7.02%) has much smaller proportion, compared with the two most frequently used communication modality. It seems that the ports have made use of the diversity and richness of communication forms on Facebook to large extend. While the largest amount of postings are showing users pictures with more intuitive and specific information, there are also considerable number of postings attempting to lead users to outside websites. These outside websites could be online news media, the sites of certain port's partner organization or the port's official website and other social media platform. In this way, the ports offer their users broader information sources.

Table 4-21 Summary of "Like" for each communication type

Modality of Communication	N	Number of "Like" Mean	Std. Deviation	95% Confidence Interval for Mean		Minimun	Maximum
				Lower Bound	Upper Bound		
1.Link	118	6.483	8.330	4.964	8.002	0	56
2.Video	29	12.517	11.322	8.211	16.824	0	38
3.Link+Picture	49	18.184	24.659	11.101	25.267	0	123
4.Picture	160	24.713	34.188	19.375	30.051	0	209
5.Only text	57	10.053	13.149	6.564	13.542	0	75
Total	413	15.850	25.210	13.411	18.288	0	209

Table 4-22 Summary of "Comment" for each communication type

Modality of Communication	N	Number of comments Mean	Std. Deviation	95% Confidence Interval for Mean		Minimun	Maximum
				Lower Bound	Upper Bound		
1.Link	118	0.525	1.436	0.264	0.787	0	10
2.Video	29	1.552	1.956	0.808	2.296	0	8
3.Link+Picture	49	0.673	1.519	0.237	1.110	0	7
4.Picture	160	1.563	3.107	1.077	2.048	0	27
5.Only text	57	0.632	1.459	0.244	1.019	0	7
Total	413	1.031	2.317	0.807	1.256	0	27

To further understand the effectuation of different communication types, we calculate the

average number of “Like” and comments for each format of communication. The results are shown in the two tables above. Since Bartlett’s test rejects the variances between groups are equal for the average number of both “Like” and comments ($P_{\text{Like}}=0.0000$; $P_{\text{Comment}}=0.0000$), we turn to conduct the more robust non-parametric test: Kruskal-Kwallis rank test. The results confirm that there are significant differences in the average number of “Like” and comments among different formats of communication ($P_{\text{Like}}=0.0001$; $P_{\text{Comment}}=0.0001$).

According to the mean values, the most often used communication modality, pure text with pictures seems also do the best in attracting “Like” and comments, whereas the second often used one, text complemented only by links does the worst. The least used type of communication: the postings containing video also perform fairly well in terms of the average number of “Like” and comments. The fact may tell us that ports would better to post more pictures and video onto the “Wall” rather than links. Alternatively, the ports could further enrich their postings by links together with pictures, since the combination of links and pictures seems also receive more “Like” and comments than only links on average.

A little surprisingly, the purely-written content is not that unpopular as expected. It indicates the textual messages could also be eye-catching to some extends, if the ports put a little more thoughts into them.

3. Content

In the literature review chapters, we determined that the seaport marketing would more focus on developing long-term relationship with their customers. In this regard, the communication content on the seaport Facebook pages is less likely to be some short-term marketing promotions, such as sales, advertisements or persuasive messages. The fact confirms our expectation.

Table 4-23 The summary of communication content on the eleven ports' Facebook

Content of Communication	Obs.	Percentage(N=413)
1.News	121	29.30%
2.Event-related information	102	24.70%
3.Reminder	33	7.99%
4.Program/project/strategy introduction	19	4.60%
5.Port photo/video	28	6.78%
6.Service introduction	11	2.66%
7.Internal communication	20	4.84%
8.Vessel/operation introduction/report	37	8.96%
9.Other	42	10.17%

In the table, we have listed eight categories of communication content showing on the eleven seaports' Facebook pages, according to the three-month data. Obviously, general information, such as news (29.3%), event information (24.7%), any types of reminder (7.99%), introduction of port program, strategies (4.6%) or services (2.66%) and vessel/operation introduction (8.96%), was the most frequently used content of communication for the eleven ports' Facebook. Besides, 4.84% of the postings can be classified as 'Internal communication'. It stands for such postings through which Port welcomes new recruited employees, wishes a happy birthday, mourns the deceased employee or interacts with their interns. 6.78% of communication is simply showing photos of certain ports or relevant video like port-made microfilm or time-lapse video of the Port. However, additionally, many other categories of communication content have also been observed but rarely used across the eleven ports (i.e. their frequency is less than 11 times). The less often presented content, for example, could be summary of Port magazines, recommendation of a book, real-time information updates, promotion of other social media, ask opinion, encourage message and so on. These categories of communication content is less like straightforward information disclosure, but concerns more about the social media's function of promoting, relationship-building or even market research. The lower frequency of these kinds of content may indicate seaports have just started to make more use of the marketing potential of social media.

We also attempt to estimate the users' preference on different content through the number of "Like" and comments.

able 4-24 Summary of “Like” for each category of communication content

Content of Communication	N	Number of "Like" Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
1.News	121	11.826	19.470	8.322	15.331	0	123
2.Event-related information	102	20.186	33.530	13.600	26.772	0	209
3.Reminder	33	3.939	4.582	2.315	5.564	1	19
4.Program/project/strategy introduction	19	13.105	15.198	5.780	20.431	0	54
5.Port photo/video	28	20.821	35.127	7.200	34.442	0	180
6.Service introduction	11	8.636	8.698	2.793	14.480	1	27
7.Internal communication	20	14.500	10.029	9.806	19.194	0	36
8.Vessel/operation introduction/report	37	27.081	32.116	16.373	37.789	0	156
9.Other	42	16.833	15.735	11.930	21.737	0	75
Total	413	15.850	25.210	13.411	18.288	0	209

Table 4-25 Summary of “Comment” for each category of communication content

Content of Communication	N	Number of comments Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
1.News	121	0.537	1.033	0.351	0.723	0	6
2.Event-related information	102	1.235	2.059	0.831	1.640	0	9
3.Reminder	33	0.242	0.751	-0.024	0.509	0	4
4.Program/project/strategy introduction	19	0.474	0.697	0.138	0.809	0	2
5.Port photo/video	28	1.321	2.389	0.395	2.225	0	9
6.Service introduction	11	0.455	0.934	-0.173	1.082	0	3
7.Internal communication	20	1.950	3.456	0.332	3.568	0	14
8.Vessel/operation introduction/report	37	2.541	5.108	0.838	4.244	0	27
9.Other	42	1.024	1.801	0.463	1.585	0	10
Total	413	1.031	2.317	0.807	1.256	0	27

Still, the results of Bartlett’s test for equal variance ($P_{\text{Like}}=0.0000$; $P_{\text{Comment}}=0.0000$) lead us to determine the significance of differences in average amount of “Like” and comments by non-parametric ANOVA test. And the Kruskal-Kwallis rank test confirms that the differences in the number of “Like” and comments for each category of communication content are significant ($P_{\text{Like}}=0.0001$; $P_{\text{Comment}}=0.0188$).

We have noticed that the number of “Like” and comments got by the most often posted content: news (11.826, 0.537) is below the average level (15.850, 1.031). The vessel/operation introduction has received the most “Like” (27.081) and comments (2.541) on average, but its posting frequency (37) is much lower than that of News (121). On the other hand, the event-related information has been posted second frequently. And this kind of content seems do well in promoting the interactivity with users.

In regard of this situation, it is no doubt that we would suggest ports to post more content related to their vessels and operation, since this favorable content is underused in terms of frequency. However, our attitude to the news content is ambiguous. In terms of the fewer “Like”

it has received, we are not sure it is because the users really dislike news on port Facebook page, or their feelings on news are neutral, meaning neither liking nor disliking. The only thing we could suggest on news is in respect of comments, that is, the statement of news release could be more arguable, for example, leaving a question in the end of news to encourage users' discussion on it. Additionally, internal communication seems to be favorable and effective on Facebook. Many port employees seem pay close attention on each and every move of their ports' Facebook page, so Facebook or even other social media platforms might be good places for ports to interact with their employees and further conduct internal marketing practices.

4. Image

Apart from exchanging information, another objective of communication is to influence the image or perception of certain entity in people's mind. The table below has shown what kinds of images are mainly communicated via the ports' Facebook pages.

Table 4-26 The summary of communication image on the eleven ports' Facebook

Image of Communication	Obs.	Percentage(N=413)
1.Attractive waterfront/real estate	16	3.87%
2.Sustainable port	27	6.54%
3.Booming/promising port	43	10.41%
4.Community partner	128	30.99%
5.Friendly work environment/well-trained employees	22	5.33%
6.Strong economic impact/job creator	23	5.57%
7.Excellent/proactive/responsible customer services	19	4.60%
8.Efficient operation/High handling capacity	14	3.39%
9.Other	121	29.30%

Overall, 29.3% of postings carry very fragmented images that are hardly to generalize. Within the rest communication, the ports most often reflect their images as a community partner (30.99%), by sharing the information about the ports contribution on holding events for their community, supporting port region environment project or funding the community's infrastructure such as Aquatics Center. The ports made considerably more effort on building an image as community partners rather than highlighting their advantages on port products. The fact again indicates the seaport marketing on social media currently concentrates on building relationships with (potential) customers.

The following tables have recorded the users' reaction on the port images communicated through Facebook pages.

Table 4-27 Summary of “Like” for each category of image communicates to the users

Image of Communication	N	Number of "Like" Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
1.Attractive waterfront/real estate	16	33.563	28.594	18.611	48.510	3	115
2.Sustainable port	27	13.926	18.060	6.782	21.070	0	77
3.Booming/promising port	43	7.860	7.373	5.591	10.130	0	29
4.Community partner	128	20.967	32.458	15.190	26.544	0	209
5.Friendly work environment/well-trained employees	22	13.318	10.232	8.781	17.855	0	36
6.Strong economic impact/job creator	23	7.348	6.658	4.469	10.227	0	25
7.Excellent/proactive/responsible customer services	19	12.421	16.886	4.282	20.560	3	75
8.Efficient operation/High handling capacity	14	40.000	48.679	11.893	68.106	1	156
9.Other	121	11.289	18.835	7.899	14.679	0	180
Total	413	15.850	25.210	13.411	18.288	0	209

Table 4-28 Summary of “Comment” for each category of image communicates to the users

Image of Communication	N	Number of comments Mean	Std. Deviation	95% Confidence Interval for Mean		Minimum	Maximum
				Lower Bound	Upper Bound		
1.Attractive waterfront/real estate	16	0.625	0.957	0.115	1.135	0	3
2.Sustainable port	27	0.519	0.935	0.149	0.888	0	4
3.Booming/promising port	43	0.535	1.008	0.225	0.845	0	5
4.Community partner	128	1.344	2.153	0.967	1.720	0	10
5.Friendly work environment/well-trained employees	22	1.773	3.366	0.281	3.265	0	14
6.Strong economic impact/job creator	23	0.261	0.619	-0.007	0.529	0	2
7.Excellent/proactive/responsible customer services	19	0.632	0.895	0.200	1.063	0	3
8.Efficient operation/High handling capacity	14	4.857	7.523	0.514	9.201	0	27
9.Other	121	0.678	1.490	0.409	0.946	0	9
Total	413	1.031	2.317	0.807	1.256	0	27

As usual, we first employ Barlett’s test on the number of “Like” and comments received by the communication carrying different images, respectively. The results again reject the equality of variance of the two datasets ($P_{\text{Like}}=0.0000$; $P_{\text{Comment}}=0.0000$). So once again, we conduct Kruskal-Kwallis rank test on the data. The results show the differences in the number of “Like” and comments are both significant at 5 percent level ($P_{\text{Like}}=0.0001$; $P_{\text{Comment}}=0.0236$). It means users’ attitude on some port images differ much from the other port images.

In view of average amount, the image of efficient operation and high handling capacity is doing the best in attracting both “Like” and comments. But this image is presented on the ports’ Facebook pages with lowest frequency.

The good news is that, the most common image communicated on the “Wall”: community partner has received not too few “Like” and comments -- at least above the average. It might be because a large part of users are the residents of the port area, who are more willing to live in harmony with their port. The image of attractive waterfront, which has direct linkage with the daily life of the port residents, has received much more “Likes” on average than others as well.

After all, since the users most likely appreciate and have discussion on the image of efficient operation and high handling capacity, but the ports are rarely communicating this image. We

suggest the ports increase the posting frequency of this kind of image more or less, as it is also a way to build and retain the relationship especially with the users who are proud of their ports' outstanding capacity of cargo-handling and other port operation.

In short, the ports have not fully realized the marketing potential of Facebook in generating word-of-mouth communication. There are still a small part of ports have not freed user-generated postings on their "Wall". In terms of communication modality, the ports have used the multiple media formats on Facebook more or less. But in regard to the users' feedback, the advantages of video seem be underused. The major communication content on seaport Facebook pages no doubt tends to be informative and concerns more about long-term relationship. In future, the ports could update more information about vessels and their operation, which seems more welcomed by users. Finally, communicating images of efficient operation and strong handling capacity might be an alternative way for ports to develop relationship with their Facebook pages' users other than acting as community partners.

5. Conclusion and limitation

5.1 Conclusion and Suggestion

This study confirms that the port authorities have not fully realized the marketing potential of social media. Even the best performed port in our samples has not used social media as a marketing communication tool to largest extend.

Our detailed findings will be listed below in forms of answering the three sub-questions. The aim is to finally solve our research question in the end.

1. Marketing potential of seaport social media

There is no straightforward answer of this question. We have to conclude and summarize the answer from relevant fields, such as social media marketing for service industries, transportation industries and B2B businesses. The answers are a little different across different industries, but we think social media have some endowed features which fundamentally grant social media all kinds of marketing potential. These features are: 1) social media is a good place to generate word-of-mouth communication; 2) social media enables real-time information update; 3) social media allow multiple media formats; 4) the communication on social media could be two-way; 5) On social media platform, it will be easier and cheaper to reach a large amount of users with something in common. These users could become the targeted group of certain marketing promotion or market research. Inspired by the research achievements in other industries, we figure out the marketing potential of seaport social media within four points, namely market research, information disclosure, relationship marketing and service recovery. And all the four marketing functions are based on the features of social media.

2. Use pattern of seaport social media.

We have estimated in our study that about 29 percent of seaports in the world have opened at least one social media website. However, this figure is much lower than the overall level of other industries (comScore, 2008, 2009a, 2009b), indicating a large part of port authorities have not got to know the marketing potential of social media.

When we narrow down our study onto the largest ports in the three important economies: North America, Europe and Asia, the findings become more interesting. Seaports in mainland China are all absent from any social media websites, reflecting they are less likely to realize marketing

potential of social media. We further re-select ten largest seaports (excluding mainland China) to go on with the comparison among three regions. In terms of start date, North American ports have realized the marketing potential of social media for a longer time than others. In regard of number of ports having social media in our sample, the use of seaport social media is most common in North America (10 out of 10), followed by Asia (7 out of 10). However, while judging the number of social media used by per port, Asian ports perform the worst. In general, North American ports seem realized the marketing potential of social media earlier and more intensively. In addition, there are continuously new ports entering into the world of social media, whereas some ports have given up their existing social media platform. This phenomenon reflects that the awareness of marketing potential of social media is somehow polarized among different ports.

3. The ports' usage of social media marketing (communication)

According to the scoreboard, we find even the best performed port: Port of Los Angeles just gets 27 points out of 35. It means the Port's use of social media still have space to improve. Additionally, North American ports make more use of social media marketing than Asian ports, while the two European ports' awareness of social media marketing differs much from each other. After conducting case study on selected eleven ports' Facebook, we find that the use of social media has rarely been highlighted at strategic level. Specifically, in practice, the use of Facebook and Twitter are mainly information disclosure other than discussion. This fact has been confirmed during our further analysis on the marketing communication of the ports' Facebook page. Since one of the advantages of social media over other media is that it allows dynamic two-way communication. It is really a pity that the ports have not fully used this advantage. Moreover, most ports are not active in promoting word-of-mouth communication, while some ports even largely avoid this kind of communication.

In our view, seaports have not wholly recognized the inherent links between the features and advantages of social media and its marketing potential. This is the main cause which leads the ports to underuse or even totally waste the marketing potential of social media in some aspects. For the ports which want to improve their social media in marketing performance, we offer some suggestions as follows:

1. Making comprehensive social media strategies and 'Showing off' your social media. Strategy-making is a top-down management method to guide the implementation of social media marketing in full range. Afterwards, ports should try to increase the awareness of their social media websites among their (potential) customers. The most simply way of doing this is to show the links of their social media on the ports' homepage visibly.
2. Keep local and Go international. We have observed majority of Facebook communication in our sample is aiming at building relationship with the port community. It is a rather good thing as living in harmony with the port community will benefit the port cluster or port area as a whole. However, seaport industry is different from many other industries. A large part of their customers are located far away from the port. Keep using local languages may reduce the possibility of their foreign customers. Alternative ways could be learning from Port of Rotterdam, which have a Facebook page written in Dutch and a Twitter account written in English at the same time. The Port of Rotterdam has also added English subtitles to their Dutch-speaking videos. It will help seaports to reach larger audience via social media.
3. Seize the features of social media. It is natural that the owners' power of control of social media communication is limited. Some ports consider it as threats and behave rather conventionally on their own social media website. However, in fact, the free-styling and less restriction is just the things make social media marketing so special and appreciated. Thus, instead of only employing social media on the easy work of information disclosure, ports should embrace the social media's features in generating two-way communication and word-of-mouth, leveraging and enjoying the power of them. Moreover, updating real time information and quick responding on users' inquiry can be the ways of making full use of the immediacy of social media. And these usages would specially improve the customer service experience for the ports.
4. Understand users' preference. During our analysis on communication on the ports' Facebook page, we find that for both content and image of communication, ports post the most popular ones by lowest frequency. If the ports increase the amount of the postings which are preferred by users, their interaction with user will increase certainly. To achieve this, first of all, ports should determine which kind of communication is more appreciated by users.

5.2 Limitation

The main limitation of this study is that we have no opportunities to interview with port marketers, so we cannot understand the ports' use of social media inside out. Another limitation is that there is only one person doing all the classification of Facebook communication in terms of modality, content and image. The results might be biased and too subjective. The other limitation could be that the sample size of our case study on ports' Facebook pages and the following analysis is too small (11). So in the end, we cannot determine statistically that, for example, whether forbidding "post by others" on Facebook "Wall" will have negative effect on the attractiveness of the "Wall" postings and the overall page significantly.

Reference

Pisani, J.M. (1989), *Port Development in the United States (Status, Issues, and Outlook*, paper prepared for the 16th International Association of Ports and Harbors, World ports Conference, Miami Beach.

European Commission (2013), 'Europe's Seaports 2030: Challenges Ahead.' [http://europa.eu/rapid/press-release MEMO-13-448_en.htm/](http://europa.eu/rapid/press-release_MEMO-13-448_en.htm/) 29-07-2013]

Cahoon, S.C. (2004). *Seaport Marketing: A Census of Australian Seaports*. Unpublished PhD thesis. University of Tasmania, Tasmania, Australia.

Pando, J., Araujo, A. & Maqueda, F.J. (2005). 'Marketing Management at the World's Major Ports.' *Maritime Policy & Management*, 32(2), 67-87.

Pantouvakis, A.M., Chlomodis, C.I. & Dimas, A. (2010). 'Marketing Strategies in Port Industry: An Exploratory Study and a Research Agenda.' *American Journal of Economics and Business Administration*, 2, 64-72.

Slack, B. (1985). 'Containerization, Inter-port Competition, and Port Selection.' *Maritime Policy and Management*, 12(4), 293-303.

Alderton, P.M. (1999). *Port Management and Operations*. London: LLP Reference Publishing.

Atkinson, R.D. & Court, R.H. (1998). *The New Economy Index: Understanding America's Economic Transformation*. Progressive Policy Institute, Washington, DC.

Carlson, D.J. (1989). *The Port as a Business (Developing a Business Strategy)*. Australian Association of Port and Marine Authorities, Sydney.

Martin, J. & Thomas, B.J. (2001). 'The Container Terminal Community.' *Maritime Policy and Management*, 28 (3), 279-292.

Sletmo, G.K. (1999). 'Port life cycles: Policy and strategy in the global economy.' *International Journal of Maritime Economics*, 1(1), 11-37.

Stuchtey, R.W. (1991). *Port Management Textbook*. Institute of Shipping Economics and Logistics, Bremen, Germany.

Murphy, D. (Ed.). (1991). *The Marketing of Ports and Harbours*. United Nations Economics and Social Commission for Asia and the Pacific, Melbourne.

Notteboom, T.E. & Winkelmanns, W. (2001). 'Structural changes in logistics: how will port authorities face the challenge?' *Maritime Policy and Management*, 28 (1), 71-89.

Kotler, P. & Levy, S.J. (1969). 'Broadening the Concept of Marketing.' *Journey of Marketing*, 33, 10-15.

Port of Hamburg (2011). 'Port of Hamburg Marketing receives award for best port marketing-Global Institute of Logistics confers "Global Benchmark in Port Marketing" certificate.' <http://www.hafen-hamburg.de/en/news/port-hamburg-marketing-receives-award-best-port-marketing-%E2%80%93-global-institute-logistics-confers/> [29-07-2013]

Ayu, A.R.R & Abrizah, A. (2011). 'Do you Facebook? Usage and applications of Facebook pages among academic libraries in Malaysia.' *The International Information and Library Review*, 43, 239-249.

Chan, N.L. & Guillet, B.D. (2011). 'Investigation of social media marketing: How does the hotel industry in Hong Kong perform in marketing on social media websites?' *Journal of Travel and Tourism Marketing*, 28, 345-368.

Michaelidou, N., Siamagka, N.T. & Christodoulides, G. (2011). 'Usage, barriers and measurement of social media marketing: An exploratory investigation of small and medium B2B brands.' *Industrial Marketing Management*, 40, 1153-1159.

De Langen, P.W. (2004). *The performance of seaport cluster: A framework to analyze cluster performance and an application to the seaport cluster in Durban, Rotterdam and the Lower Mississippi*, ERIM PhD series research in Management no. 34.

Crawford, K. (2009). 'Following you: disciplines of listening in social media.' *Continuum*, 23(4), 525-535.

Ehrlich, K. & Shami, N.S. (2010). 'Microblogging inside and outside workplace.' Washington: AAAI Publications.

Burton,S.(2011). 'Interaction or reactive? Marketing with Twitter.' *Journal of Consumer Marketing*, 28(7), 491-499.

Albrecht, K. & Zemke, R. (1990). *Service Amercial!: Doing business in the new economy*. New York: Warner Books.

Kotler, P. (5th ed.). (2001). *A Framework for Marketing Management*. New Jersey: Pearson/Prentice Hall.

Levitt,T. (1960). 'Marketing Myopia.' *Harvard Business Review*, 38, 45-56.

Kotler, P. (1972). 'A Generic Concept of Marketing.' *Journal of Marketing*, 36, 46-54.

Wilkie, W.L. & Moore, E.S. (2003). "Scholarly Research in Marketing: Exploring the '4 Eras' of Thought Development." *Journal of Public Policy & Marketing*, 22(2), 116-146.

Koster, J.M.D. (1991). *Grondslagen van de marketing wetenschap*. Leiden: Stenfert Kroese.

Gronroos, C. (1989). 'Defining Marketing: A Market-Oriented Approach.' *European Journal of Marketing*, 23(1), 52-58.

Morgan, R.E., McGuinness, T. & Thorpe, E.R. (2000). 'The contribution of marketing to business strategy formulation: A perspective on business performance gains.' *Journal of Strategic Marketing*, 8, 341-362.

Somers, E. & de Wilde, A. (1997). 'Port marketing.' *University of Ghent*, <http://alserv.rug.ac.be/~ddsloo/portmarkew/links/portmark.him/> 07-08-2013].

Tseng, H.C. & Chang, Y.F. (2005), 'The development of port marketing strategy- A case study of Kaohsiung port.' *The Business Review, Cambridge*, 4(2), 243-248.

Chang, H.H. et al. (1998). 'A study on port marketing strategy planning.' *Chinese Technology*, 39(4), 3-11.

Marti, B.E. (1986). 'Marketing strategies: A container foreland study of the port of Miami.' *Geoforum*, 17(3), 375-382.

UNCTAD secretariat (1995). *Strategic port pricing*. Geneva: UNCTAD.

Booms, B.H. & Bitner, M.J. (1981). *Marketing of Services*. Chicago: American Marketing Association.

Branch, A.E. (1997). *Elements of Port Operation and Management*. London: Chapman and Hall.

Branch, A.E. (1998). *Maritime Economics: Management and Marketing* (3rd ed.). Cheltenham: Stanley Thornes.

Lobo, A. & Jain, V. (2001). 'Port users' perspective of the container transshipment business – Hierarchy of service quality attributes and dimensions.' *Proceedings of the Inaugural International Conference on Port and Maritime R&D and Technology*, 1, 83-90.

Stuchtey, R.W. (1978). 'Port competition and marketing.' *Port Management Textbook* (Institution of Shipping Economics ed.), 287-297.

Misztal, K. (1999). 'Marketing management in seaports.' *Strategic Management in the Maritime Sector: A Case Study of Poland and Germany*, 49-63.

UNCTAD secretariat (1992). *Port Marketing and the Challenge of the Third Generation Port*. Geneva: UNCTAD.

Stuchtey, R.W. (1991a). 'Dry ports.' *Port Management Textbook (Stuchtey, R.W. ed.)*, 3, 231-244.

UNCTAD secretariat (1993). *Strategic Planning for Port Authorities*. Geneva: UNCTAD.

Schulten, U. (1991). 'Marketing from the customer's point of view.' *Port Management Textbook (Stuchtey, R.W. ed.)*, 3, 15-31.

Dowd, T.J. & Fleming, D.K. (1994). 'Port pricing.' *Maritime Policy and Management*, 21(1), 29-35.

Ashar, A. (2001). 'Strategic pricing in newly privatized ports.' *International Journal of Maritime Economics*, 3, 52-78.

Cahoon, S. (2007). 'Marketing communications for seaports: a matter of survival and growth.' *Maritime Policy and Management*, 34(2), 151-168.

Bernard, K. (1995). *UNCTAD Monographs on Port Management: Marketing Promotion Tools for Ports*. New York: United Nations.

Frankel, E.G. (1987). *Port Planning and Development*. New York: John Wiley and Sons.

Stuchtey, R.W. (1991b). 'Port marketing organization.' *Port Management Textbook (Stuchtey, R.W. ed.)*, 3, 67-78.

Figuer, H. (1999). 'Marketing orientation in Polish seaports.' *Strategic Management in the Maritime Sector: A Case Study of Poland and Germany*, 16-28.

Piecezek, A.U. (2000). *Analysis of Marketing Strategies in Polish Ports*. Unpublished PhD thesis. University of Plymouth, United Kingdom.

Anderson, E., Lodish, L. & Weitz, B. (1987). 'Resource allocation behavior in conventional channels.' *Journal of Marketing Research*, 24, 85-97.

Frazier, G. (1983). 'Interorganizational exchange behavior in marketing channels: A broadened perspective.' *Journal of Marketing*, 47, 68-73.

Gaski, J. (1984). 'The theory of power and conflict in channels of distribution.' *Journal of Marketing*, 48, 9-29.

Guiltinan, J., Rejab, I. & Rodgers, W. (1980). 'Factors influencing coordination in a franchise channel.' *Journal of Retailing*, 56, 41-58.

Mohr, J. & Nevin, J.R. (1990). 'Communication strategies in marketing channels: A theoretical

perspective.' *Journal of Marketing*, 54(4), 36-51.

Farace, R., Monge, P. & Russell, H. (1977). *Communicating and Organizing*. MA: Addison-Wesley Publishing Company.

Guetzkow, H. (1965). 'Communication in organizations.' *Handbook of Organizations*, 534-573.

Lengel, R. & Daft, R. (1985). *The relationship between message content and media selection in managerial communications: some preliminary evidence*. Working paper. Texas A&M University.

Stohl, C. & Redding, W.C. (1987), 'Messages and message exchange process.' *Handbook of Organizations*, 451-502.

Anglemar, R. & Stern, L.W. (1978). 'Development of a content analytic system for analysis of bargaining communication in marketing.' *Journal of Marketing Research*, 15(2), 93-102.

Gross, W. (1968). 'Profitable listening for manufacturers and dealers: How to use a communication system.' *Business Horizons*, 11(12), 35-44.

George, W. & Berry, L. (1981). 'Guidelines for the advertising of services.' *Business Horizons*, 24(4), 52-56.

Mortimer, K. (2002). 'Integrating advertising theories with conceptual models of services advertising.' *Journal of Services Marketing*, 16(5), 460-468.

Conduit, J. & Mavondo, T. (2001). 'How critical is internal customer orientation to market orientation.' *Journal of Marketing Research*, 51(1), 11-24.

Maxham, J.G. (2001). 'Service recovery's influence on consumer satisfaction, positive word-of-mouth, and purchase intentions.' *Journal of Business Research*, 54(1), 11-24.

Murray, K.B. (1991), 'A test of service marketing theory: Consumer information acquisition activities.' *Journal of Marketing*, 55(1), 10-25.

Zeithaml, V.A. (1981). 'How consumer evaluation process differ between goods and services.' *Marketing of Services*, 186-190.

Busby, E., Field, D., Forth, P., Harsaae, J., Rose, J. & Salha, H. (2010). 'The CMO's imperative: Tackling New Digital Realities.' *Boston Consulting Group*, <http://www.bcg.com/studiesresearch/2010F500.pdf> [10-08-2013]

Olof, H. (2006). 'Integrated marketing communication: from tactics to strategy.' *Corporate Communication*, 11(1), 23-33.

Mangold, W.G. & Faulds, D.J. (2009). 'Social media: The new hybrid element of the promotion

mix.' *Business Horizons*, 52, 357-365.

UNCTAD secretariat (1993b). *Port Organization and Management*. Geneva: UNCTAD.

Richter, A. & Koch, M. (2007). *Social software- status quo und Zukunft*. Technischer Bericht, Nr. 2007-01, Fakultät für Informatik, Universität der Bundeswehr München.

Drury, G. (2008). "Opinion piece: Social media: Should marketers engage and how can it be done effectively?" *Journal of Direct, Data and Digital Marketing Practice*, 9, 274-277.

Kaplan, A.M. & Haenlein, M. (2010). "Users of the world, unite! The challenges and opportunities of Social Media." *Business Horizons*, 53, 59-68.

Ryan, D. & Jones, C. (2009). *Understanding digital marketing: marketing strategies for engaging the digital generation*. London and Philadelphia: Kogan Page.

Thackeray, R., Neiger, B.L., Hanson, C.L. & McKenzie, J.F. (2008). "Enhancing Promotional strategies within social marketing programs: Use of web 2.0 social media." *Health Promotion Practices*, 9, 338-343.

O'Reilly, T. (2005). "What is Web 2.0 – O'Reilly Media."

<http://oreilly.com/web2/archive/what-is-web-20.html/> 05-09-2013]

Adebanjo, D. & Michaelides, R. (2010). "Analysis of web 2.0 enabled e-cluster: A case study." *Technovation*, 30(4), 238-248.

Michaelidou, N. & Siamagka, N.T. & Christodoulides, G. (2011). "Usage, barriers and measurement of social media marketing: An exploratory investigation of small and medium B2B brands." *Industrial Marketing Management*, 40, 1153-1159.

NirsenWire (2010). "Led by Facebook, Twitter, global time spent on social media sites up 82% year over year."

<http://blog.nielsen.com/nielsenwire/global/led-by-facebook-twitter-global-time-spent-on-social-media-sites-up-82-year-over-year/> 05-09-2013]

Burton, S. & Soboleva, A. (2011). "Interactive or reactive? Marketing with Twitter." *Journal of Consumer Marketing*, 28(7), 491-499.

Wunsch-Vincent, S. & Vickery, G. (2007). *Participative web and user-created content: Web 2.0, wikis and social networking*. Paris: Organization for Economic Co-operation and Development.

Brown, E. (2010). *How implementing social media strategies (the right way) attracts customer loyalty*. Master thesis, School of Communication, American University, Washington, D.C., USA.

comScore. (2008). "Eight five percent of Brazilian Internet users visited a social networking site in

September 2008.”

http://www.comscore.com/Press_Events/Press_Releases/2008/11/Social_Networking_in_Brazil/
05-09-2013]

comScore. (2009a). “Social networking has banner year in France, growing 45 percent.”

http://www.comscore.com/Press_Events/Press_releases/2009/2/Social_Networking_France/
05-09-2013]

comScore. (2009b). “India’s social networking market sees global brands gain prominence in 2008.” http://www.comscore.com/Press_Event/Press_Release/2009/2/India_Social_Networking/
05-09-2013]

Kietzmann, J.H., Hermkens, K., McCarthy, I.P. & Silvestre, B.S. (2011). “Social media? Get serious! Understanding the functional building blocks of social media.” *Business Horizons*, 54, 241-251.

DEI Worldwide. (2008). “The impact of social media on purchasing behavior. Engaging consumers online.”

<http://www.delworldwide.com/files/DEIStudy-Engaging%20ConsumersOnline-Summary.pdf/>
05-09-2013]

Kim, A.J. & Ko, E. (2010). “Impacts of luxury fashion brand’s social media marketing on customer relationship and purchase intention.” *Journal of Global Fashion Marketing*, 1(3), 164-171.

Kim, A.J. & Ko, E. (2012). “Do social media marketing activities enhance customer equity? An empirical study on luxury fashion brand.” *Journal of Business Research*, 65, 1480-1486.

Stelzner, M.A. (2013). “2013 social media marketing industry report- How marketers are using social media to grow their business.”

<http://www.socialmediaexaminer.com/social-media-marketing-industry-report-2013/>
05-09-2013]

Patino, A., Pitta, D.A. & Quinones, R. (2012). “Social media’s emerging importance on market research.” *Journal of Consumer Marketing*, 29(3), 233-237.

Sawchuk, D. (2011). “The changing landscape of online qualitative research.” *Alert!*, 51(3), 20-24.

Wright, D.K. & Hinson, M.D. (2008). “How blogs and social media are changing public relations and the way it is practiced.” *Public Relations Journal*, 2(2).

Woodall, G. & Colby, C. (2011). “Social media vs. focus groups for qualitative research.”

<http://www.greenbook.org/markting-reasearch.cfm/social-media-versus-forcus-groups-qualitativ-e-research-03914/> 05-09-2013]

Mallon, S. (2012). “Using social media for market research.”

<http://www.dreamgrow.com/using-social-media-for-market-research/> 06-09-2013]

Lemon, K.N., Rust, R.T. & Zeithaml, V.A. (2001). "What drives customer equity?" *Market Management*, 10(1), 20-25.

Hanna, R., Rohm, A. & Crittenden, V.L. (2011). "We're all connected: The power of the social media ecosystem." *Business Horizons*, 54, 265-273.

Konziets,R.V., de Valck, K., Wojnicki, A.C. & Wilner, S.J.S. (2010). "Networked Narratives: Understanding Word-of-Mouth Marketing in Online Communities." *Journal of Marketing*,74, 71-89.

Jantsch, J. (2008). "Let's talk social media for small business."

<http://www.ducttapemarketing.com/socialmediaforbusiness.pdf>/06-09-2013]

Samsung Design Net. (2009). "Luxury fashion business using technology."

<http://www.samsungdesign.net/Report/content.asp?an=589/> 06-09-2013]

Belch, G.E. & Belch, M.A. (2007). *Advertising and promotion. An integrated marketing communications perspective*. New York: McGraw-Hill Irwin.

McKenzie, J.F., Neiger, B.L. & Thackeray, R. (5th ed.). (2009). *Planning, implementing, and evaluating health promotion programs*. San Francisco: Benjamin Cummings.

Janoff, B. (2013). "Social media case study: 'Crash the super bowl.'"

<http://brief.promaxbda.org/content/social-media-case-study-crash-the-super-bowl/> 10-09-2013]

Burstein, D. (2013). "5 lessons in participatory marketing from Doritos' 'Crash the super bowl' and CMO Ann Mukherjee."

<http://www.fastcocreate.com/1679605/5-lessons-in-participatory-marketing-from-doritos-crash-the-super-bowl-and-cmo-ann-mukherjee/> 10-09-2013]

Ayeh, J.K., Leung, D., Au, N. & Law, R. (2012). "Perceptions and strategies of hospitality and tourism practitioners on social media: An exploratory study." *Information and Communication Technologies in Tourism*, 1-12.

O'Conner, P. (2008). "Online social media and travel International- September 2008- Market research report." <http://oxygen.mintel.com/sinatra/oxygen/display/id=387948/> 10-09-2013]

Amy, K. (2011). "5 ways to use social media in service industry."

<http://www.onmarksolutions.com/5-ways-to-use-social-media-in-the-service-industry.html/> 10-09-2013]

Pal, S. (2011). "Top 10 airports on social media- case studies of the airport best at driving engagement."

<http://simplifying.com/2011/top-10-airports-on-social-media-case-studies-of-the-airports-best-at-driving-engagement/> 10-09-2013]

Brennan, R. & Croft, R. (2012). *The use of social media in B2B marketing and branding: An exploratory study*. A preprint version of a paper submitted for consideration for the Journal of Customer Behaviour. Westburn Publishers Ltd.

Naude, P. & Holland, C.P. (2004). "The Metamorphosis of marketing into an information-handling problem." *Journal of Business & Industrial Marketing*, 19(3), 167-177.

Wilson, D. & Vlosky, R. (1998). "Interorganizational information system technology and buyer-seller relationships." *Journal of Business & Industrial Marketing*, 13(3), 215-234.

Hills, S.B. & Sarin, S. (2003). "From market driven to market driving: An alternative paradigm for marketing in high technology industries." *Journal of Marketing Theory and Practice*, 11(3), 13-24.

Shin, C. (2009). *The Facebook era: Tapping online social media networks to build better products, reach new audiences and sell more stuff*. Boston: Prentice Hall.

BtoB & the Association of National Advertise (2009). "New ANA/B2B magazine study: Marketers embrace newer media platforms." <http://www.ana.net/content/show/id/557/> 15-09-2013]

Threatt, S.R. (2009). *Facebook and the ideal social marketplace: A study of the marketing benefits of social media practices*. Master thesis, Faculty of the Graduate School, University of Southern California, USA.

Facebook (2013a). "How do I choose who can post on my Page's timeline?" <https://www.facebook.com/help/356113237741414/> 15-09-2013]

Facebook (2013b). "Liking things on Facebook." <https://www.facebook.com/help/www/452446998120360/> 15-09-2013]

Masanell, R.C. & Ricart, J.E. (2010). "From strategy to business models and onto tactics." *Long Range Planning*, 43(2010), 195-215.

Bart, C.K., Bontis, N. & Taggar, S. (2001). "A model of the impact of mission statement on firm performance." *Management Decision*, 39(1), 19-35.

Mehdzadeh, S. (2010). "Self-presentation 2.0: Narcissism and self-esteem on Facebook." *Cyberpsychology, Behavior and Social Networking*, 13, 357-364.

Clavio, G. & Kian, T. (2010). "Uses and gratifications of a retired female athlete's Twitter followers." *International Journal of Sport Communication*, 3, 485-500.

Hollenbaugh, E. (2011). "Motives for maintaining personal journal blogs." *Cyberpsychology*,

Behavior and Social Networking, 14, 13-20.

Wallace, L., Wilson, J. & Miloch, K. (2011). "Sporting Facebook: A content analysis of NCAA organizational sport pages and Big 12 Conference Athletic Department Pages." *International Journal of Sport Communication*, 4, 422-444.

Schultz, B. & Sheffer, M. (2010). "An exploratory study of how Twitter is affecting sports journalism." *International Journal of Sport Communication*, 3, 226-239.

Kassing, J. & Sanderson, J. (2010). "Fan-athlete interaction and Twitter tweeting through the Giro: A case study." *International Journal of Sport Communication*, 3, 113-128.

Strategic Plan 2010/2011. (2010). Los Angeles: Port of Los Angeles.

Strategic Plan 2006-2011. (2008). Los Angeles: Port of Los Angeles.

Strategic Plan 2012-2017. (2012). Los Angeles: Port of Los Angeles.

Port of Long Beach Communications Plan 2008-2011. (2008). Long Beach: Communication and Community Relations Division of the Port of Long Beach.

Strategic Plan (2009 Update ed.). (2009). Long Beach: Strategic Plan Steering Committee of the Port of Long Beach.

Port of Oakland Strategic Plan for Fiscal Year 2011-2015. (2010). Oakland: Strategic Plan Task Force of the Port of Oakland.

Port of Oakland Strategic Plan for Fiscal Year 2011-2015 (2014 Update ed.). (2013). Oakland: Strategic Plan Task Force of the Port of Oakland.

Comprehensive Annual Financial Report for the Virginia Port Authority for the Fiscal Year Ended June 30, 2013. (2013). Virginia: Finance Department of the Virginia Port Authority.

2013 Strategic Initiatives. (2012). Houston: Port of Houston Authority.

Gateway: Charting Port Klang's Future Course. (2011). Klang: Port Klang Authority.

Annual Report 2012 of the Port of Rotterdam Authority. (2012). Rotterdam: Port of Rotterdam Authority.

Port of Algeciras Bay Handbook 2013.14. (2013). Algeciras: Puerto Bahia de Algeciras.

Port of Tokyo 2013. (2013). Tokyo: Bureau of Port and Harbor, Tokyo Metropolitan Government.